THE

MEDICAL NEWS AND ABSTRACT.

VOL. XXXIX. No. 8. AUGUST, 1881. WHOLE No. 464.

CLINICS.

Clinical Lectures.

THE TREATMENT OF THE NIGHT-SWEATING OF PHTHISIS.

A CLINICAL LECTURE DELIVERED AT THE PENNSYLVANIA HOSPITAL.

BY J. M. DA COSTA, M.D.,

PROFESSOR OF PRACTICE OF MEDICINE AND OF CLINICAL MEDICINE AT THE JEFFERSON MEDICAL COLLEGE; PHYSICIAN TO THE PENNSYLVANIA HOSPITAL.

[Reported by Frank Woodbury, M.D.]

GENTLEMEN: The first case to which this morning I shall call your attention is that of Mary E., 26 years of age, unmarried. There is a bad family record; the mother is supposed to have died of pneumonia; more likely it was a tubercular affection, as she was ill for some time. The patient herself has never been in very robust health, and last August she had, it is said, an attack of intermittent fever, which lasted for four weeks. The menses were regular until April, since which time they have not appeared; and for the last three months she has had a troublesome cough, night-sweats, fever, and has lost forty pounds in weight. There has been no hæmoptysis. She has been obliged to work all the time, until she found herself absolutely unable on account of shortness of breath and debility. One point I want to make here clear to you—the thoracic symptoms came on suddenly, beginning in November, as a chest-cold following exposure.

Upon admission, she was found to have a cough and a troublesome hectic fever. Under the left clavicle the percussion-note was dull, and upon auscultation blowing respiration, and some moist râles indicated the advanced tubercular deposit. Her feet were œdematous, the urine was normal.

As regards treatment, she has been placed, since admission, upon pills of quinia, digitalis, and opium, and on these, with a liberal diet, she somewhat improved. But there was an element in the case which did not improve—her night-sweats—until, after being in the hospital for some time, the gentleman who had charge of her ordered her atropia (gr. $\frac{1}{60}$), to be given at night. The effect was most evident in putting a stop to one annoying symptom, the habit of getting up frequently at night to urinate.

Upon the sweating the influence of the drug was not so positive. It is, indeed, noted that even under one-sixtieth of a grain of atropia each night, with quinia, iron, and good food, the night-sweats continued, and the atropia was stopped. This note was made on the 13th of January, the atropia having been begun on the 8th.

I will not go on with the history of the case further than to say that a troublesome diarrhœa broke out about this time, and was met with bismuth and opium. The diarrhœa only for a time improved; she was then with better effect placed upon oxide of silver and opium. But what became of the sweats? They persisted. The atropia, as I have said, was discontinued after about ten days' trial, having produced some, but not a striking, effect; after the diarrhœa appeared it was not considered advisable to continue it. Upon the 28th of January, she was placed upon salicylic acid. It was noted at this time that the other symptoms were better; the diarrhœa no longer existed.

But what I wish to call your attention particularly to here, is the subsequent course of the fever and of the sweats, how influenced by salicylic acid, and what other remedies were made use of. The first effect of the salicylic acid given in doses of thirty-grains at night was an undoubted influence upon the sweats; they were less, they became localized more about the neck and face, and far less general. She slept well, her cough also was somewhat better, which cannot be attributed to the salicylic acid, but to the steady improvement in the nutrition, under good diet and the pills of quinia, opium, and digitalis, which kept the fever temperature in check. I exhibit to you the chart, which is the daily axillary thermometric record. You see it is sometimes as high as 103° or 104° in the evening and nearly normal the next morning; it seems almost like the record of remittent fever, so great is the difference between morning and evening. Her affection was therefore characterized by irregular fever, or rather by what is the regular fever of this type of pulmonary disease. The highest point reached was on the 4th of February (104.6° in the afternoon), while she was still taking salicylic acid.

I found that while the acid had some effect, it did not influence the sweats sufficiently, and a material change in the treatment was decided upon. I then put her upon a remedy to which I wish to call your attention—a remedy which I have been using in this hospital for the last three years—ergotine. The salicylic acid being suspended, she was ordered ergotine, two grains in pill, three times a day. The results were successful. I do not tell you that the salicylic acid had no effect, for it had, but the ergotine had a better effect. What is particularly observable is that the temperature has declined, the range is lower, and, indeed, it has been on several occasions lately a normal temperature. The highest point reached since taking the remedy is 101½°, the lowest 98½°.

Now having explained the case, and especially the treatment of the symptom for which I brought her before you, let us make an examination of her present state in order to compare it with her previous condition.

Her temperature this morning is 98½°, normal; last night it was 100½°. She says that she had a slight sweat last night about the face and neck; it was, however, of short duration, and nothing like as profuse as it has been. This was the first sweating for nearly a week. There has not even been any moisture.

As regards the physical signs, you observe dulness on percussion, still very marked at the left apex. Upon auscultation, I perceive harsh respi-

ration, almost bronchial, with distinct prolonged expiration. Harsh respiration extends all over the lung, with here and there moist crackling, but this is particularly noticed at the upper part of the lung, both anteriorly and posteriorly. On the right side, the vesicular murmur is somewhat harsh, only there is no marked dulness, except immediately under the clavicle. In other words, the signs of consolidation are here very light.

Her appetite is better, though the tongue is still somewhat coated. She has, since Feb. 13, been taking the syrup of the iodide of iron in twenty-drop doses, the pills of quinia, digitalis, and opium having been stopped at that time. The ergotine has been continued, and has been increased to four times a day. [Let me add that sweating was never again marked. The patient died about a month afterwards from exhaustion.]

Case II.—There was another case similar to this, occupying bed No. 1 which I shall bring before you. I will give you very briefly her history. She has a tubercular deposit, especially in the right lung, of about one year's standing; she lost a brother by tubercular consumption. The history is that of a gradual disease with considerable wasting, purulent expectoration, and softening just beginning. Her most troublesome symptom was night-sweating. For this she was first ordered atropia, one-sixtieth of a grain at night on the 21st of December of last year, and the remedy was continued until Jan. 3, 1881, at first with good results, but finally losing its effect. Oxide of zinc with hyoscyamus, aromatic sulphuric acid, strychnia, quinia, all answered partially for a time, but only partially, and salicylic acid, ten grains three times daily, was used for four or five days (the evening temperature being about 101°), with some, but not with very decided result. On Feb. 6, ergotine, two grains four times daily, was ordered, while the same general tonic and nutrient treatment was continued. After the second night she began to improve, and by the 13th the sweats had stopped, with the exception of the night of the 12th, when there was a little sweating on the face and breast. From this time to the 28th, she took the medicine far less regularly, though she remained more or less under its influence. For twenty days there was no night-sweating, only occasionally a little moisture about the face and breast; with the stoppage of the exhausting discharge, her general health improved markedly. Unfortunately, by the 5th of March, the remedy began to lose its effect, and she soon afterwards left the hospital. She returned in about one month for a few weeks, and the night-sweats, which, however, had never been so bad as prior to the ergotine treatment, were for a time again very favourably influenced by this agent.

I shall now call your attention to a couple of cases for some time under my observation in the men's medical, in which also profuse sweating was a very distressing symptom.

Case III.—John McC., bed 37, a case of pneumonic phthisis of left lung, followed by tubercular complication of both. There is beginning softening at left apex; the cough is most troublesome, so are the night-sweats. They have been going on for eight months, and gaining in intensity. The patient is weak, but his disease was not actively progressing; the temperature was but little above the normal, and sometimes normal. A treatment by pills of quinia, opium, and digitalis, and by the compound syrup of the phosphates improved his cough and general condition, but had no influence on the sweats. A granule of one-sixtieth of a grain of atropia at night arrested them promptly, but though continued for a week had no permanent effect on them; oxide of zinc was

temporarily of service; strychnia, one twenty-fourth of a grain three times a day, did better; and, being free from sweats for nearly two weeks, and under the effect of his general treatment, he improved decidedly. But the sweats returned, and he was placed, instead of on the strychnia, on ergotine, two grains three times daily. After the second night they were very much better, but they did not stop until the fourth. They were absent for a week, then he had a rather profuse sweat during a restless night. The ergotine was now given four times daily, and prevented further sweating. After about a week of this increased dose it was suspended, except occasionally, and though the disease was progressing, sweating was not again a prominent symptom.

Case IV.—In this man of fifty years of age, a large cavity was found at the left apex, and, when he came under observation, decided night-sweats had existed for two months. The evening temperature did not exceed 102°. He passed six pints of urine daily of spec. gr. varying from 1007 to 1010, and free from albumen and sugar. Chlorodyne benefited his cough very much; the night-sweats were markedly and permanently controlled by ergotine in two-grain doses three times daily, which also strikingly lessened the quantity of urine passed.

But it is needless to multiply cases. I merely brought these forward because they were all marked instances of the symptom I wish to discuss with you—the night-sweating of phthisis; and they illustrate it in some of the various forms and different stages of the disease. Now sweating in phthisis is both an annoying and a serious symptom. It very often happens in the early morning hours, and the patient is languid all day from the drain. It may follow the decline of the paroxysm of the hectic fever, but also occurs in those who have but little if any fever, and certainly nothing like hectic paroxysms. To arrest it is not only to give the patient comfort, but to save his strength and thus to retard the progress of the disease. The remedies which influence the destructive malady and improve nutrition, restrain it; but they do so slowly, and we turn, therefore, naturally, to agents which, while they act much more quickly in so doing, assist at the same time the influence of the general treatment. A great many of these remedies are empirical: some take into account the supposed pathology of the sweats, and apply the fine experimental therapeutical research of the laboratory to the benefiting of a serious symptom. We might do this with even more accuracy if the pathology of the occurrence were better understood; if it were known how it is that the morbid conditions act on the sweat-centres which are so profoundly disturbed. Yet both physiology and pathology are in this matter of sweating, alike in health and in disease, still a good deal in the dark, notwithstanding such excellent observations as those of Luchsinger, Nawrocki, and Vulpian, and the increasing knowledge concerning the sweat-centres situated in the medulla and adjacent cord.

But I shall not wander away from my subject, the treatment of night-sweats in the light of actual experience. And here I shall select for discussion the action of such remedies as are valuable yet comparatively new, and not of such tried veterans as oxide of zinc, the mineral acids, tincture of iron, and decided doses of quinia.

Yet before I examine into the value of the medicinal substances I will allude to some subjects connected with clothing and with bathing which I know are constantly ignored and are yet of importance. The clothing

is often much too heavy. Take a case just seen in the female ward. Her night-sweats were kept up by heavy clothing. We found her wrapped up in shawls; she said that she could not take them off because she felt chilly; she felt chilly, and next was sweating, then sweating and next chilly, and so she wanted still more clothes, and the sweating was kept up. I wish then to impress upon you that one of the first things to be taken care of in the management of night-sweats is to see that the patient's clothing is light, particularly that he be not weighted down with heavy bedclothing; and very often you may by paying attention to this simple means prevent or certainly very much lessen the exhaustive perspirations. In addition, direct your attention to the state of the skin; let the patient take a daily slightly astringent sponge-bath, having in the water alum, rock-salt, or even whiskey or alcohol, or let him be sponged with quinia dissolved in whiskey or alcohol, or with water to which a small amount of solution of ammonia has been added; and follow this by friction to give a healthy glow to the skin. You will find that in some persons very hot water checks the excessive sweating, but in the majority moderate friction, following astringent washes is better.

In reviewing the remedies with which the last few years have made us familiar, we find quite a number with which the experiments and the sagacious observations of Dr. William Murrell have acquainted us. In the *Practitioner* for 1879 and 1880 they are detailed in full, and a summary of the use of them might be thus made, which I think will be borne out by the experience of any one who will try them: *Muscarine* stops sweating on the second or third night without causing abnormal dryness of the skin. It is best given in three doses, at the interval of an hour, in quantity not less than five minims of a one per cent. solution of a liquid extract. *Picrotoxine* produces, generally, no effect the first night; may be given solely at bedtime, either in pill of one-sixtieth of a grain, or in solution with a little glacial acetic acid. *Nitrite* of *amyl*, a good, though not a very certain or pleasant agent. Dose from one to three minims.

Dover's powder, although it cannot be called a new remedy, since its use was advocated many years since by Stokes, has come again into prominence, and in doses of two to ten grains at bedtime undoubtedly shows power in controlling colliquative sweats. I wish I could give you a theory that accounts satisfactorily for its action. But I have none in my own mind to which I turn unfalteringly. There is the same difficulty in explaining its influence on pathological sweating that there is with all the agents, as, for instance, picrotoxine and jaborandi, which are excretors of perspiration. I suppose the solution will be found in their peculiar action on the sweat-centres; but we are still remote from it. Nor can I exactly tell you in what cases Dover's powder does better than the astringent class of remedies. I think, however, that it is in cases with decided rise of temperature. I am persuaded that it is to the ipecac in the composition that much of the good is due. For I have tried giving ipecac in small doses frequently repeated, about one drop of the wine every second hour, and have seen it have a most undoubted influence on the morbid discharge. In these small doses its action may be that of a tonic to the sweat-centres in the nervous system.

I have just referred to *jaborandi*. I shall presently explain to you how I have for some years used it, added in small doses to atropia, to correct some of the unpleasant effects of this. And it is while so using it that I began to be aware of its influence on night-sweating of phthisis. But I

only half knew the fact until I read the interesting observations of Dr. John M. Keating,[1] who, prescribing it in small quantities of the infusion, found it answer extremely well; he believes that it contracts the capillaries, and thus explains its action. Dr. William Murrell, whom I have already quoted, has administered it or pilocarpine in thirty-three cases, in all stages of the disease. Of pilocarpine the dose employed was generally $\frac{1}{20}$ of a grain, either at bedtime or three or four times daily. It acts somewhat slowly, but is said to be very efficacious, and even to lead to permanent results. I confess that I have not formed so high an estimate of it. Indeed, I cannot say that, given by itself, it ranks with me very high.

Salicylic acid has attracted attention more for its supposed influence on the febrile conditions of phthisis than as a remedy for the sweating. Still it has been so employed. Köhnhorn[2] has recommended dusting with salicylic acid three parts, ten of starch, and eighty-seven of talc earth, the entire surface of the body. Internally salicylic acid has been resorted to for night-sweats by my colleague, Dr. Hutchinson, and from him I learnt its use for that purpose. In some cases it seemed to have a good influence, but the cases are not yet numerous enough to warrant a definite conclusion as to its merits.

I was led to use *physostigma* for the same reasons which led me to investigate jaborandi, to try and counteract with it some of the disagreeable effects of atropia, while preserving its useful ones. But in doing so it was first necessary to observe whether calabar bean had in itself any influence on night-sweats; and during the winter of 1879–1880, with the active and zealous aid of Dr. Henry M. Wetherill, at that time the resident physician in my wards, we tested the matter in this Hospital. We found that calabar bean had an influence. To cite a few of the observations: In a man with advanced tubercular consumption, attended with profuse night-sweats, two minims of fluid extract of physostigma were given; he was sweating at the time; his respirations were 30; the pulse, 120; the temperature, 100°. In an hour afterwards the skin was almost dry; respirations were 24; the pulse was 104; the temperature, 96.6°; it rose in two hours after this to 97.8°. There had been no unpleasant effects, except great thirst. In another case we first noticed the sweating carefully, while a placebo only was given. It came on profusely at 12 P. M., and while profuse, the respirations were 32, pulse was 122, the temperature, 97°; the sweating lasted four hours; as it passed away, the respirations were 28, the pulse, 114, the temperature, 99.8°. At the same period of the next twenty-four hours, and when the sweating had fairly begun, although the temperature then was 99.5°, a dose of two minims of the fluid extract of calabar bean checked the sweating in an hour and a half, the temperature rising to 100.6°. In a third case of marked phthisis with night-sweats, the temperature before the sweats at 3 P.M. was 100.5°; in an hour afterwards, with a profuse sweat it had declined to 98.6°; four minims of the fluid extract were then given, the sweat was completely checked in an hour, the temperature rising to 99°; there was no decided effect on the pupil, and no unpleasant symptom. In a fourth case, the profuse early morning perspirations were arrested in two hours by the same dose, the pupils being slightly contracted, the pulse becoming less strong, the temperature declining from 100° to 97.6°. Now, both in these and other cases the remedy was given in two minim doses, once or

[1] Phila. Med. Times, June, 1877. [2] Berliner klin. Wochenschrift, No. 1, 1880.

twice in the evening, sometimes four minims at one dose (the preparation being of the strength of one of the bean to a minim of fluid), and the sweating was undoubtedly to a great extent prevented; but only in one instance was the effect at all permanent; and, on the whole, while the action of calabar bean is undoubted, it is decidedly inferior to atropia and to ergot.

I shall now pass to the two remedies which I think pre-eminent—atropia and ergotine. The use of *atropia* is now so widely known, and it has been so much resorted to, that, although having employed it systematically in this Hospital for night-sweats for years before it began to attract general attention,[1] we may claim for it the strong partiality of early knowledge, I shall only state that it is at present accepted as the most potent agent we possess to control inordinate sweating, particularly in consumption. Not one of the remedies which I have mentioned to you has, in my opinion, anything like its power. But atropia has a most serious drawback. Even the smallest dose, to be effective, $\frac{1}{80}$ of a grain, produces such a dry mouth and throat that it often keeps the patient awake, and, in not a few instances, increases his cough. Duboisia, so much like atropia, even in its influence on sweating, has the same unfortunate effect. Local remedies, such as sucking pieces of ice, chewing chamomile flowers or sassafras pith, sipping infusions of slippery elm, only afford partial relief, moreover they prevent sleep. And the inconvenience witnessed led me to a series of observations, that I have here carried on for the last four or five years, to find among the agents which possess a physiological antagonism to atropia one which, without materially, if at all, diminishing its action on the skin, might mitigate its influence on the salivary secretion. Not to detain you too long, I will speak particularly of strychnia, calabar bean, and jaborandi, added to belladonna or atropia. With reference to strychnia, it is in many respects not antagonistic to belladonna; one, indeed, may promote the activity of the other; and I was led to hope all the more from a combination being effective with a smaller dose of the belladonna or atropia, and was induced to persevere with my observations after reading Lauder Brunton's remarks on the unaided action of strychnia in the night-sweating of phthisis.[2] But this expectation has only been partially realized. The atropia preponderates, and even in decreased doses dries the throat.

From both calabar bean and jaborandi we get better results. I have already laid before you my observations with the former given alone, and you will recall the fact, which has been made very apparent by the experiments of Fraser, Bartholow, and other investigators, that in most respects it is a true antagonist to atropia. It leads to an increased flow of saliva, and is said to increase the perspiration. But it certainly does not do so in phthisis, whatever be the explanation; and if you add gr. $\frac{1}{8}$ to gr. $\frac{1}{4}$ of the solid extract, or two to three minims of the fluid, to $\frac{1}{80}$ or $\frac{1}{60}$ of atropia, you preserve or heighten the good effect of the latter, and lessen its evil ones. Still better I find is jaborandi. The drug, you are aware, illustrates in its action a complete antagonism to atropia and produces profuse secretion from the salivary glands. Yet, though in health it promotes the most active discharge from the skin, its powers in small doses to arrest morbid sweating have been abundantly proved, and added in small doses to atropia, say ten to fifteen drops of the ordinary

[1] Clinical Lecture, Phila. Med. Times, Feb. 15, 1871; and Ib., Oct. 1872.
[2] St. Bartholomew's Hospital Reports, 1879.

fluid extract to $\frac{1}{60}$ of a grain, or, as I have often done, a dose of this quantity given two hours in advance of the atropia, and repeated with it, the sweats will be as well influenced, while the discomfort arising from the dryness of the mouth will be greatly diminished. The effect of the combination is undoubted, and its power is not confined to the night-perspirations of phthisis. You will remember the man in bed 34 with chronic pleurisy and sweats, which here were increased by the doses of jaborandi he was taking to reduce the effusion. $\frac{1}{60}$ of atropia at night relieved the night-sweating completely, gave him in so doing comfortable nights, and enabled us to continue the other treatment. He had no inconvenience with his throat, until we suspended the jaborandi, placing him on iron, but continuing the atropia; yet when this parched his throat, a single dose of jaborandi quickly relieved him.

Still we cannot, even by the combination of jaborandi with atropia, always remedy the annoyance. It is difficult to hit upon the exact dose, and the atropia will at times overpower the jaborandi. I have thus been led to look for an agent which should possess something of the certainty and permanence of action of atropia without its drawbacks, and I think I have found it in *ergotine*. My first observations, made some years ago, were with the fluid extract of ergot, but I have abandoned this for ergotine as better and more easily administered. The power ergot has of contracting the arterioles and of checking excessive discharges suggested its use, and the results have been very satisfactory. Ergotine was prescribed in the cases with which I introduced the subject to your attention this morning, and I could give you many more in illustration, showing its effects in the various forms of phthisis. The dose of ergotine I employ is usually two grains three or four times daily, and by the second night the influence begins to manifest itself. The remedy may then be continued and gradually abandoned; it produces no annoyance or discomfort whatever, and its good effects persist after it is withdrawn. It will fail or lose its effect as every other remedy will fail or lose its effect in the treatment of such an unrelenting disease, but the proportion of failures is small compared with that of the successes.

You will ask for a comparative estimate between it and atropia. For immediate results ergotine is far inferior. If you see a patient in the morning in whom you wish to prevent a violent sweating in the evening, there is no remedy which for promptness can compare with atropia; there is, moreover, no remedy which is so potent in cases where the skin pours forth quantities of fluid. But where such speedy and decisive action is not demanded, where you are obliged to keep up a remedy for some time, where to do so with atropia becomes very difficult or occasions first discomfort and then actual distress, you have then in ergotine an agent to which you can turn with confidence. Less prompt, perhaps less certain, it is better borne, and shares with atropia the valuable power of often making a durable impression. Nay, I have seen it do so when atropia has failed.

Gentlemen, I have now laid before you the results of a series of inquiries into a matter of deep and practical interest. In summing it up in your minds you will see that there are many articles, some of which do the work required of them well, others not so well. It is not easy to say which agent in a given case will succeed best, and you ought to be as accurately as possible acquainted with the action of many. Speaking generally there are remedies which act as astringents and as arresting the

...ERAL LIBRARY ...iversity of ...HIGAN

secretion; there are others which under normal circumstances promote perspiration, and allay the morbid sweating, either because they substitute a normal discharge for an abnormal one, or, what is more likely, because given in small doses they tone up and gently stimulate to healthy action the sweat-centres and the respiratory centres. But whatever the explanation, the latter class of remedies, Dover's powder, jaborandi, picrotoxine, are, on the whole, greatly inferior to the former, and not so permanent. And it is permanency of action at which we must, as far as possible, aim. This gives time for the general treatment to take effect; it arrests a serious drain, and what I have endeavoured to show you in the case of several of the agents, if we once succeed in making for more than a very short period a decided impression, the annoying, dangerous symptom may be altogether relieved or at least for ever broken in intensity.

CLINICAL REMARKS ON TWO CASES OF TUMOUR OF THE BLADDER.

Delivered at the University College Hospital on January 17th.

By BERKELEY HILL, F.R.C.S.,
Professor of Clinical Surgery in University College, London.

GENTLEMEN: There have been recently in our wards some excellent examples of those rare affections, tumours of the bladder. I propose to-day to select for remark two of these cases, partly for their rarity, partly because we have the morbid growths themselves for your inspection.

In speaking of tumours, I mean true morbid growths; and exclude those swellings of the hypertrophied prostate met with in certain old men, which, by their deformity, produce a train of suffering sufficiently acute. During the year just past, we have had several such patients in our wards, affording examples of some or other of the consequences of hypertrophy of the prostate. But with such cases it is not my intention to occupy your time to-day.

The list of morbid growths comprises:—

1. *Fibrous polypi*, fibrous outgrowths from the surface of the bladder, an extremely rare affection, described by Civiale and one or two others. Of these growths, a few specimens are preserved in museums.

2. *Scirrhus and encephaloid* of the walls of the bladder, growths nearly always secondary to cancerous disease elsewhere, but occasionally occurring primarily in this situation.

3. *True epithelial cancer*, beginning in and slowly extending in the wall of the bladder.

4. *Villous tumour.*

These growths may all begin in the bladder itself; but affections of other organs may lead to projections into, and invasions of, the bladder, as, for example—

5. *Malignant disease of the prostate*, generally encephaloid in character.

6. *Tubercular disease* of the vesiculæ seminales, or of the vesiculæ seminales and prostate.

At this moment, there is an old man in Ward 10, seventy years of age, and in fair general health, who has, for the last eighteen months, been unable to void any urine by natural efforts. He draws it off through the catheter, by which the urethra is easily traversed until the prostate is reached, where, if not well curved

or very supple, it stops short. There is no suprapubic dulness; but, when the prostate and floor of the bladder are examined *per rectum*, an irregular mass of stony hardness is felt; one firm nodule projects at the upper margin of the sphincter ani into the rectum. This condition of the base of the bladder not only obstructs the flow of urine, but is also the cause of the tenesmus to which he is frequently subject, though the rectum itself is at present free from the growth. The urine is normal, always clear, and free from blood or pus; but the increasing irritability of the bladder is the patient's constant torment. By night or day, he seldom passes an hour without being compelled to use his catheter; for, as soon as two or three ounces of urine collect, his bladder makes violent efforts to expel it. The wide extent of the induration of the prostate and floor of the bladder, and its irregular stony hardness, are the grounds on which we consider it to be a case, not of simple hypertrophied prostate, but of malignant, probably scirrhous, disease.

There is also at the present time, in Ward 9, a young man, whose life is tormented by cystitis and great irritability of the bladder, sometimes more, sometimes less acute, but of already more than twelve months' standing; and occasioned by a condition of the vesiculæ seminales which we believe to be tubercular. He has already undergone Syme's amputation at the ankle for strumous disease of that joint. On another occasion, I shall draw your attention to tubercular disease of this region, of which, from time to time, we get examples sent in as cases of stone. I will pass to the two cases of which the bladders are before you.

The first is the case of epithelial primary disease, whose history has been carefully recorded by Mr. A. J. Grant, the ward-clerk. The patient, No. 2448 in the hospital register, was sixty-three years old; and, until four months before his admission, had no sign of disorder of his urinary organs. The first symptom of his disease that attracted attention was hemorrhage. The urine became red, and the blood increased so much that in a week's time it came away from the bladder in clots. Soon, but after the appearance of clots, pain began to be felt; but only after the bladder was emptied. So long as the patient was still, and did not pass urine, he was free from pain. This character of the pains continued until after his admission to hospital; but, in a few days, there were added violent attacks of spasmodic effort to void urine, which, always painful, became excruciating towards the end of his life, growing more and more frequent, and at the end almost constant.

The frequency of micturition, at first not unusual for a man of his time of life —twice by night and about every four hours by day—steadily increased during the three months which elapsed after the first appearance of the blood, until the call to pass urine came every quarter of an hour. Up to this time, the urine, though bloody, was not offensive, and had no sticky deposit. At this stage of his malady, an irregular practitioner sounded the patient for stone. After this exploration of his bladder, which he described as being prolonged and very painful, his sufferings increased; micturition became necessary every quarter of an hour; and the urine, still loaded with blood, grew very offensive. Probably the exploration was the immediate cause of the cystitis, though this affection was almost certain to arrive sooner or later. Still, the danger of thus aggravating the patient's sufferings by instrumentation should always be kept carefully in view, when deliberating on the expediency of sounding a patient. On his admission, on December 7, 1880, he was found to be a fairly stout man, and in pretty good general condition; of this stoutness he lost little before death; but his state as to micturition was pretty much as already described; frequent (half-hourly) calls to pass urine—its ejection being accomplished with much straining and pain, the latter referred to the end of the penis; and blood and ropy pus passed every time with

the urine. The sound introduced into the bladder struck no stone, but caused great pain in passing over the neck; indeed, the exploration could not be completely carried out, owing to the pain it excited. The prostate was not enlarged, nor could any unusual condition of the bladder be detected by rectal examination. There were no enlarged glands to be felt in the inguinal or the iliac regions.

Thereafter, various remedies were employed to allay the cystitis and consequent irritation of the bladder, but without avail. On one occasion, the patient was anæsthetized, the bladder carefully sounded, and its ammoniacal ropy contents washed out by Clover's bottle. As before, no stone was found; but, in the purulent deposit from the fluid so exhausted, shreds of tissue were found on microscopical examination, by Mr. Stanley Boyd, our surgical registrar; these consisted of patches of epithelial and nucleated cells, to some of which a shred of fibres was attached. In spite of anodynes, of attempts by tying in India-rubber catheters, or by washing out with quinine or astringent solutions, or simple warm water, to diminish the accumulation of fetid urine, the patient's sufferings increased; the catheter could not be retained more than four or five hours; then the spasm it excited became unbearable. At this time constitutional disturbance began. His tongue became dry, and coated with brownish fur; and his strength rapidly diminished. In these circumstances, I proposed to him that he should submit to operation—not with any expectation of cure, but, by establishing a free drain for the urine as fast as it reached the bladder, of relieving him of the constant pain and straining excited by its accumulation and putrefaction therein. With this object, on December 29th, I performed the usual lateral operation for the removal of stone from the bladder, making at first a small opening in the neck of the bladder, through which I introduced my finger, and recognized a soft mass projecting from the floor on the right side. By enlarging the incision in the neck of the bladder, I was able to bring away, in a lithotomy forceps, the mass I felt, which proved to be a pedunculated growth of cellular tissue, as large as a marble, but too much disorganized by sloughing for its structure to be minutely examined. By free injections of cold water, several such masses were washed out, along with much stinking pus and mucus. The hemorrhage during the operation was unimportant. The patient was but little relieved by the operation, though bleeding ceased and the urine drained away continuously through the wound. His spasms, though less frequent, continued with nearly the same severity until his death, on the third day after the operation.

Post-mortem, the condition of the urinary organs was very interesting, and especially so when compared with that of the case of villous disease, whose examination we made on the same afternoon. The bladder was contracted, of about six ounces' capacity, and, when laid open along the mesial line from the neck by the anterior part to the apex and everted, it revealed this condition. There is a growth, which, commencing on the inner surface opposite the pubes, continues along the right side to the apex, and there crosses to the left. On the right, the growth is much the thickest; while, on the left, its advancing margin is well defined, being raised near the apex a quarter of an inch above the general level of the mucous membrane. The surface of the growth is generally sloughy and very irregular; long shreds hang down from the upper portion, and from the right side depends a finger-like process, one inch long and a quarter of an inch across. The mucous membrane of the bladder elsewhere is gray and pigmented, thus showing considerable chronic inflammation. The walls are rugose, from moderate hypertrophy of the muscular tissue. Here are some sections of the growth, showing the nests of nucleated epithelial cells, occupying the meshes of a fine connective network, freely supplied with capillaries. You should compare it with the specimen from the villous growth, showing the delicate branching

processes hanging freely from the tumour. The ureters are but little, if at all, dilated, though, like the bladder, the mucous membrane and that of the pelvis, especially of the pelvis in the left kidney, are thickened, grayish, and marked with small hemorrhages. The kidneys themselves are congested and interstitially inflamed, the left particularly so. These changes in the kidney are of recent origin, set up by extension of the irritation from the bladder.

You will note that the condition of the body after death confirmed the indications of the symptoms during life, that the patient died of exhaustion consequent on the irritation of the bladder, and from the cachexia of the tumour. The general system was but to a small extent invaded. A few of the lumbar lymphatic glands were enlarged, and pale gray on section, but no consecutive multiplication of the growth beyond the bladder was found.

Next come the notes of the case of villous growth. J. M., 38 years old (No. 2615 in hospital register), a lamplighter, and, therefore, walking much daily, had been a healthy man, and noticed nothing unusual in his habit of passing urine until April, 1880, eight months before admission. Then suddenly his urine became red with blood after exercise, and flowed less freely than before. This red coloration was for some time only observed during and after exercise; never on rising from bed in the morning. The intermixture of blood continued, without intermission, to be the main trouble until last Christmas, with the exception only of three or four days, during which his urine was of ordinary aspect. About Christmas new symptoms appeared, namely, constant desire to micturate and uncontrollable dribbling. On Christmas day, clots of blood came away during the efforts to pass urine; at the same time pain commenced to be felt in passing urine, and, for three or four minutes afterwards, at the end of the penis. When admitted on December 30th, he walked to the hospital from Kentish Town, and the urine passed on his arrival was dull crimson. The next day the patient was passing urine and blood every few minutes, with much painful straining to void the last few drops; often black clots, without any urine, were then ejected. There were no renal or suprapubic tendencies; no swelling of the testes or cords. The prostate was of normal size, but the trigone of the bladder, felt through the rectum, appeared to be thickened though yielding. The finger experienced the kind of resistance afforded by a moderately distended bladder. To clear up this doubt, a flexible *coudé* catheter was passed into the bladder, encountering no difficulty, and giving rise to no pain in its passage; but, as only a few drops of blood escaped through it, some water was injected; this returned almost untinged with blood, being forcibly driven out both through and along the sides of the catheter. The bladder being thus proved to be empty, the catheter was withdrawn, and brought away in its eye a gray granulation. This was at once put under the microscope, when it was seen to be a compound papilla, covered by slender columnar epithelium. This discovery materially aided the diagnosis, otherwise difficult, of vascular tumour of the bladder. This diagnosis, suggested by the persistent painless hemorrhage, and by the fact that villous is the most frequent form of tumour of the bladder, was rendered certain by the structure of the papilla. This examination took place the day after the patient's admission, viz., December 31st. The treatment ordered was turpentine, in five-minim doses, every four hours, opiates to relieve spasm, rest in bed, and ice to the perineum. It was also determined that, if this did not check the hemorrhage in twenty-four hours, recourse should be had to subcutaneous injections of sclerotic acid, a form of the active principle of ergot. As the bleeding had not diminished by 11 A. M., on January 1st a subcutaneous injection was given, not of sclerotic acid, but of ergotine itself, specially prepared on a new method by Mr. Gerrard,

the hospital pharmacist. The injection was repeated at 5 P. M., and again at 1 A. M. on the next morning (January 2d). On each occasion half a grain was injected, about half the dose usually employed. By 11 A. M. the hemorrhage had greatly diminished, though not wholly ceased, when suddenly syncope set in, and he died. *Post-mortem* examination twenty-seven hours after death. The body was somewhat blanched, and the viscera were all more or less drained of blood. The heart contained a small quantity of fluid blood, free from clot, and was firmly contracted in rigor mortis. The pulmonary arteries were clear of coagula. Owing to the obscurity surrounding the cause of death, all the viscera were carefully examined, and were all found to be free from disease, with the exception of the urinary organs. These, from the great size of the growth, formed an admirable example of a villous tumour in the bladder; such tumours usually are not larger than a marble or small strawberry; but this, you see, is as large as a hen's egg, measuring over two inches in length, by one and a half inches in breadth. The growth itself is formed of long delicate villi of deep red colour, and attached by a short pedicle, measuring less than half an inch across, to the margin of the orifice of the right ureter, around which it so grows that a probe passed down the ureter reaches the bladder only after traversing the growth. These growths are scarcely ever, if ever, found away from the trigone, and usually spring from one of the three orifices. In structure they are true papillomata, almost warts; and they prove fatal, not by any malignant character of their growth, but mainly by their mechanical action, wearing the patient out with pain and irritation, and partly by exhaustive loss of blood, for the structure of the tumour is loose and highly vascular, each of these delicate papillæ being provided with its capillary vessel, so that the frequent rupture of bloodvessels is an unfailing occurrence. We owe to our surgical registrar, Mr. Stanley Boyd, the preparation of the specimens for our inspection, and also these beautiful sections of the growths under the microscope now before you. You will at once recognize the fine branching papillæ, each one containing its capillary, and covered by slender columnar epithelium, of which the mass is almost entirely composed.

The bladder, ureters, and kidneys are excellent examples of the changes which take place as simple results of impediment to escape of urine from the bladder. The bladder itself is of ordinary capacity, its mucous membrane is healthy, not chronically inflamed as in the example of epithelial cancer. It is rugose and slightly sacculated from the great hypertrophy of the muscular coats, being half an inch thick in some places. The ureters are vastly dilated on both sides, that from the right kidney almost admitting the little finger, and having its coats much thickened, but, like the enormously dilated pelvis and calyces, presenting no trace of inflammation, either recent or old. The kidney itself shows an extreme result of distension, being little more than a bag of fluid. All signs of papillæ or pyramids are gone, their sites at the heads of the calyces being occupied by depressions. The cortex forms a thin layer, nowhere more than a quarter of an inch thick, and with the expanded pelvis and calyces constructs the bag which the kidney has become. The left kidney in all respects resembles the right, except that the dilatation of its several parts is considerably less. The cortex is of ordinary thickness, pale yellow, and of normal consistence; and a good deal of the pyramids still remains. It is obvious how these changes come about. The growth began at the outlet of the right ureter, consequently impediment to the escape of urine from the right kidney commenced very early, and was kept up, long before any difficulty occurred to the entry into the bladder of urine from the left ureter; thus expansion of the left ureter and kidney began only when the tumour had gained such a bulk that would enable it to overlie the

orifice of the left ureter, when it fell on the floor of the bladder, or was compressed against the trigone in the empty state of the viscus. So, again, the hypertrophy of the muscular coat of the bladder was caused by the impediment to the discharge of urine when the tumour blocked the neck. This position of the tumour against the neck of the bladder probably excited the violent spasmodic contractions which were so painful during the last days of the patient's life.

It is interesting to compare the absence of inflammation in this bladder with the abundant evidence of cystitis, pyelitis, and nephritis in the case of epithelioma. There we have the slaty gray colour and punctiform hemorrhages in the mucous membranes, the shiny muco-pus adhering to the walls of the bladder, ureter, and pelvis, and the nephritis most decided in the left kidney, and not quite absent in the right one. You will recollect, in the patient's account of his state previous to his admission here, that his urine, though bloody, was neither ropy nor offensive before the sounding by the quack; in fact, probably it was very similar to that which our patient with villous tumour passed—dark red, though fairly clear, and with a sediment consisting almost wholly of blood-clots. After the sounding the urine quickly changed, and showed evidence of cystitis. Cystitis being set up, it was not difficult, in a bladder deformed by thickening of its coats, for a shred of putrid muco-pus to slip into, or be driven into, the orifice of an ureter during some expulsive effort of the bladder, and there excite inflammation, which would quickly travel along the irritated mucous surface to the pelvis of the kidney. This is one mode, though probably not the only one, by which pyelitis is set up in cystitis; but it is a mode that explains why, in cases of cystitis and pyelitis set up by upwardly extending irritations, one ureter and kidney shall be affected while the other escapes.

In both these patients the sign that enabled us to make a correct diagnosis during life was the evidence obtained by putting under the microscope fragments of the tumour itself, these fragments coming away in the fluid withdrawn from the bladder in the one case, and being brought out in the eye of the catheter in the other. But such good fortune is rare, and probably portions of the growth are separated only when it has attained considerable development. Hence in many cases the diagnosis (on which depends the treatment) has to be made on symptoms. Now the three leading symptoms of tumour are—1. Irritable bladder; 2. Hemorrhage; 3. Pain of a particular kind. But these symptoms also often accompany several other affections, namely, stricture of the urethra, stone, chronic retention from enlarged prostate, malignant and tubercular disease of the prostate and vesiculæ seminales, and certain diseases of the kidney; even piles or ulcer of the rectum are occasional reflex causes of irritable bladder. The presence or absence of such possible causes as these must be ascertained by physical examination of the parts. In these two cases the exclusion of all causes of vesical irritative hemorrhage and pain, but stone, was easy during life. The condition of the urethra, and of the prostate and rectum, could be ascertained, while the clinical symptoms, though not strongly indicative of stone, did not certainly contradict that disorder.

Irritability of the Bladder.—In cases of stone, stricture, and prostatic retention, it usually happens that too frequent and somewhat painful desire to pass urine is the first symptom for which relief is sought. When stone excites it, irritability is an early sign, because the cause of irritation, the stone, most frequently lies on the neck, being continually thrown thither by the action of the vesical muscles. Cases of tumour commonly differ from the rest, in that bleeding is the first symptom to attract the attention. Irritability of the bladder is a late symptom. It did not appear in our two patients for some time (four weeks in

one man, and several months in the other) after hemorrhage had become habitual. The early or late variation in the time of the appearance of frequent calls to pass urine in cases of tumour when bleeding has become a prominent feature of their malady, depends much on the position of the growth; that is, in its proximity to the outlet from the bladder. In our case of epithelioma, the morbid growth began at the right side of the bladder, and, spreading in all directions along the mucous membrane, soon reached the neck. But in the case of villous tumour, the tumour was attached to the right ureter by a pedicle, and could affect the neck only when it had attained bulk sufficient to enable it to fall against that part. In the former, irritation soon came; in the latter, only shortly before death. Nevertheless, the character of the irritation they excited had features strongly unlike the irritability caused by calculus.

Hemorrhage.—The bleeding had characters differing from that customary with stone; it was the first symptom sufficiently urgent to attract attention; it was from the beginning comparatively copious, and soon consisted in great part of clotted blood. Again, the hemorrhage was persistent, and was almost throughout the leading symptom. This is very characteristic of tumour, though intervals of cessation of hemorrhage do occur during the course of a tumour. Even several weeks may at first intervene between the discharges of blood; no other symptom is developed, and the urine may remain in the intervals quite free from blood or albumen. But when once bleeding is set up, it becomes more and more copious, and the intervals between the bleedings grow more and more short, while the irritability is continuous, slight, or altogether absent. When a stone causes hemorrhage, it is seldom copious at first, and never prolonged; but it very rarely refrains from causing irritability.

Hemorrhage from calculus is caused by the stone eroding the mucous surface of the bladder where it lies, and opening a vessel whence blood escapes; but such vessels are commonly of small calibre, and are quickly closed by coagulation of the blood. Hence, characteristic of such bleedings, is the small quantity lost, being often sufficient merely to furnish traces of albumen in the urine, or to appear as a few drops of blood *per urethram* distinct from the urine. Copious intermittent hemorrhage may be caused by stone, but only in cases complicated by hypertrophied prostate, on which some dilated veins are coursing. Such veins often bleed when grazed by a stone, just as they will bleed copiously for a short time, even when there is no foreign body in the bladder, if the organ become congested by exposure to cold, by venereal excitement, etc. But, when the gorged vessels have drained themselves, and their orifices are plugged by coagula, the bleeding ceases until they are again over-distended, or again injured, and their coats give way anew. There is no regular increasing frequency and gravity of the hemorrhages. It is different with the bloodvessels of a rapidly enlarging tumour. They are very numerous, have but thin walls, and are ill-supported in the soft cellular tissue, in which the fibrous element is but scanty. In such new structures the vessels that first give way are plugged, and shrink, while new ones develop rapidly in their place, which are ruptured in a similar manner. Thus a continual escape of blood from the surface of the tumour is maintained for some considerable time.

Pain.—I have spoken of the *irritable bladder* and of *hemorrhage* as symptoms of tumour, and how, in their niceties, they vary from the peculiarities of irritability and hemorrhage set up by stone. The *pain* felt in these cases of vesical tumour closely resembles that due to stone, being felt at the end of the penis, sometimes elsewhere also; but the pain of stone is most acute immediately *after* the bladder is emptied. It is explained by supposing that the bladder's muscular contraction squeezes the stone against the ulcerated patch which it has worn for

itself, and that the pain subsides when enough urine has trickled into the bladder to expand its sensitive surface away from the stone. This explanation is probably a true one in many cases, but not in all. The character of the pain in our case of tumour was not exactly of this kind. It was caused by micturition, it is true; but during micturition it was most severe, and culminated in one or two agonizing spasms during the ejection of the last drops. It then began to subside, and soon disappeared, until the next act of micturition revived it. Hence the pain was one felt *during*, more than *after*, micturition. In the case of epithelioma there was ulceration of a great part of the surface of the bladder; in the other patient there was no ulceration, but there was a foreign body, the villous growth, which was embraced by the extrusor muscles of the neck of the bladder, and prevented their natural contraction. Both conditions accounted for the agonizing spasms. These differences in the symptoms were not sufficient to warrant the exclusion of stone as the cause of the patient's sufferings. But they were so far different as to suggest tumour rather than stone. This exclusion of stone was rendered more probable in the case of epithelioma, by failure to detect it with the sound. Sounding is useful to gain information respecting the condition of the bladder, beyond the proof it affords of the absence of stone. The presence even of villous growths sometimes may be felt by the sound, while, when no such growth can be found, the sound forms an useful landmark for the finger in the rectum when searching all that portion of the bladder which can be reached by that means. Sounding should certainly have been performed in the second patient when the loss of blood had been somewhat checked, and the patient's condition improved by opiates and rest. As it was, instrumentation in both cases obtained positive evidence for us, though in that of villous growth the sound was represented by a soft, flexible catheter.

To sum up, then, gentlemen, the remarks which I have made. The symptoms of tumour of the bladder resemble very closely those of stone; this, on reflection, we can see is only what we might expect on *à priori* grounds, for a tumour is, in all that concerns the functional activity of the bladder, as much a foreign body as a stone. The pain in tumour, though like that caused by stone, has its distinctions, which, though not very strong, are useful in diagnosis. It is due in some cases to ulceration; in some, to the efforts at expulsion brought about by grasping of the tumour by the extrusor muscles. Hemorrhage is in tumours an early symptom, and, once established, is the most constantly present; signs of irritation of the bladder are later on in their occurrence. With stone, the reverse holds good; bladder-irritation is an early and almost constant symptom, and hemorrhage, as a rule, is not copious, and is always markedly intermittent; in the cases where stone does produce copious bleeding, this proceeds from an enlarged prostate.

Exercise, perhaps, influences hemorrhage from stone more than bleeding from tumour; though it has a marked influence over the latter. But exercise is most provocative of pain to the calculous patient; witness the suffering caused by a ride in a jolting cart. On the other hand, exercise seldom causes pain to the patient with tumour. Sudden stoppage occurs with both classes of patients, though more frequently with the calculous ones. Owing to this want of broad distinction between the diseases, it will be proper in every case to sound the bladder, in order to gain all information possible respecting the state of the contents and of the neck and base of the bladder, and the structures in relation with it, by the sound and the finger.—*Brit. Med. Journal*, May 14, 1881.

Hospital Notes.

BELLEVUE HOSPITAL, NEW YORK.

(Service of Dr. AUSTIN FLINT, Sr.)

(Specially reported for the MEDICAL NEWS AND ABSTRACT.)

Diabetes Mellitus; Treatment with Codeia.

Peter S., æt. 35, Ireland, liquor dealer; admitted May 5th. In earlier life the patient's occupations were of a laborious nature, and led to frequent exposures and hardships. His later years have been spent in leisure. He has always drank malt liquors, in moderation, but never was addicted to the use of spirits until five or six months ago. Since then he has used them to excess, and often upon an empty stomach. He had the initial lesion of syphilis twenty years ago, which was promptly treated, and was not followed by secondary or tertiary symptoms. He has not indulged in excessive venery. He has not had malarial fever, gout, or rheumatism. The patient enjoyed perfect health until about six months ago, when he became very dissipated. He spent almost every night, for a number of consecutive months, in gaming and debauchery. He drank brandy very often during the night, ate nothing, and, being absorbed with gaming, habitually retained his urine longer than was natural. He suffered from gastritis, with frequent vomiting. For four or five months he hardly took a substantial nourishing meal. He cannot remember that he received any injury during this time, to his head or abdomen. Three months since he began to be debilitated and habitually constipated, having no fecal evacuations for eight or ten days at a time. One day, after having induced free catharsis with a saline purgative, he noticed that his urine became suddenly abnormally abundant. He believes that he passed several gallons daily. He suffered from urgent thirst. A month later his appetite became voracious. He was obstinately constipated. He suffered from progressive asthenia, extinction of venereal desire, capricious appetite, slight febrile movement, and progressive emaciation, but did not take to the bed until his admission, on May 5th. He now complains of asthenia, but has no pain, epistaxis, œdema, or emesis. He has great thirst and an enormous appetite. His urine is pale, acid, sp. gr. 1036, and has no albumen nor casts. It contains thirteen grains of sugar to the ounce.

Treatment.—His diet was restricted to meats, milk, fish, eggs, cabbage and tomatoes, coffee, tea, and sherry wine. The only remedy employed in his case consisted of codeia, gr. ½, three times a day. On May 6th he passed 184 oz. of urine; on the 7th, 170 oz.; on the 8th, 135 oz.; on the 9th, 130 oz.; and on the 12th, 140 oz. [He left the Hospital a few days later to go to Europe. The improvement was progressive, although not marked, up to the time of his departure.—REP.]

—

Acute Articular Rheumatism; Treatment with Salicin.

William N., æt. 26, Ireland, clerk; admitted April 30, 1881. The patient states that he belongs to a healthy family, none of the members of which have ever been afflicted with rheumatism. Five years ago, after exposure to inclement weather, he was attacked with acute pain in his left ankle, with marked redness and swelling of that joint. The inflammatory symptoms were subsequently fully developed in the knees, hips, shoulders, elbows, and wrists. This attack confined the patient to his bed for two entire months, at the end of which time he resumed his occupations, but suffered from constant dyspnœa, vertigo, epistaxis, and cardiac palpitation. Two and a half years ago he had another attack of acute articular rheumatism, which was milder, and incapacitated him for labour

only three weeks. The third attack occurred in March, 1881. He was admitted to Bellevue Hospital and treated during two weeks, with salicylate of soda. At the end of that time he was discharged quite cured, but returned on April 30th with acute inflammation in his knees and his left shoulder. His temperature was 101½°. His urine was normal. His heart was notably hypertrophied, the apex beat being in the 7th intercostal space. An organic systolic cardiac murmur was heard over the aortic orifice and was transmitted into the carotids. An endocardial systolic murmur was heard over the left ventricle, but was not transmitted.

Treatment.—Dr. Flint being of the opinion that endocarditis constitutes a contraindication to the employment of so powerful cardial depressants as salicylic acid or the salicylates, ordered salicin, grs. xx, to be administered every two hours, and sod. bicarb., grs. xxx, every three hours. On May 1st the urine had been rendered dististinctly alkaline. The temperature was 101°. The pain had not been relieved. On May 2d the temperature was 100¾°, and the pain had almost disappeared. On May 4th not a vestige of inflammation could be detected in the affected joints, and there was absolutely no pain. The cardiac murmurs persisted. The patient was allowed to sit up, and on the next day to walk about.

May 12. There is still some slight stiffness in the joints, which were the seat of the inflammatory symptoms. Aside from this the patient is quite well. The heart murmurs are still audible, although the endocardial murmur is very faint.

—

Insolation; Treatment by Cold Shower-Bath; Recovery.

Theodore Turnbull, M.D., of Monticello, Florida, reports the following case:—

C. A., æt. seven years, female, rather delicate, while returning from school on the afternoon of May 15, 1881, became suddenly unconscious and fell headlong to the ground. Her companions thinking her playing, deserted their little schoolmate, but afterwards observed their mistake, and then alarmed the neighbourhood; she was removed to the nearest house, which was only a few yards. When I arrived a few hours later, I found her in a comatose state; pulse quick and feeble; temperature in axilla 106.5°; respiration stertorous and somewhat accelerated; relaxation of sphincter ani; sighing and moaning sounds on expiration; no tracheal râles or convulsions; pupil neither contracted nor dilated, but not responding to light.

The treatment consisted of the wet-sheet method advised by Dr. Flint. The girl was stripped and placed in a sheet, water being sprinkled over the whole surface at intervals of half a minute; whiskey was given at short intervals, and in small doses to prevent vomiting. She began to rouse up in about ten minutes, the shower-bath being kept up for at least half an hour, at which time her pulse was soft and slow; temperature in axilla 100°. After being removed from the wet sheet, she was wiped dry and put to bed, ordered whiskey and carbonate of ammonia every hour.

May 16. Feeling comfortable, dismissed.

Cases of sunstroke are exceedingly rare in this section of the country, yet persons who have never spent the summer in Florida generally suspect that the profession is often called on to treat such cases. The non-occurrence of insolation is due, perhaps, to our delightful summer nights, which counteract the heat of the day, as it were, which are very much unlike the oppressive nights experienced by the residents of large cities. The day was intensely warm, yet the sun was hidden by clouds the greater part of the time, and, as we afterwards observed, these few hours of intense heat were the forerunner of a heavy rain and wind.

MONTHLY ABSTRACT.

Anatomy and Physiology.

The Reflex Relations between Lungs, Heart, and Bloodvessels.

The influence which the respiratory movements exert upon the blood-stream in the lungs, heart, and bloodvessels is a subject which must always attract the attention of the physician and the physiologist. At first sight, it might appear that the problem was a simple mechanical one, explicable by physical laws; but here, as elsewhere within the body, it is necessary to take into account the nervous apparatus and the influence it exerts directly or in a reflex manner in modifying the action of the organs concerned. In considering the relation of the respiratory movements to the heart, lungs, and great vessels, it has recently been the practice to look, perhaps, too much to the subject as a physical problem, to the exclusion of the nervous apparatus and its effects thereon. We consider, therefore, that Dr. Julius Sommerbrodt of Breslau has done good service in directing the attention of physicians and physiologists to the "reflex relations between lungs, heart, and bloodvessels." Dr. Sommerbrodt shows that afferent nerve-impulses proceed from the lungs, and modify by reflex action the activities of the heart and bloodvessels in even a greater degree than is already known to be the case.

The recent histological investigations on the nervous apparatus of the lungs in the newt, frog, and other animals, by Egerow, W. Stirling, and Kandarazki, afford an anatomical basis in support of the physiological results. The results of these observers are conclusive that the lungs are supplied by a very large number of nerve-fibres—medullated and non-medullated—in the course of which many nerve-ganglia, as Remak showed, are intercalated. It is quite certain that all these nerve-fibres do not end in the non-striped muscle which exists in the bronchial wall and between the air-vesicles; but that many of them are afferent fibres, which convey impressions from the lungs to the respiratory and cardiac centres, so as to modify the activity of these centres by reflex agency. The present teaching on this question is that, during inspiration, the intrathoracic pressure is lowered, more blood flows from the veins into the right side of the heart, the blood-stream in the lungs is affected, so that more blood passes into the left side of the heart. Both these factors, as well as the increased number of heart-beats during inspiration, increase the arterial blood-pressure during inspiration. During expiration, the increased intrathoracic pressure causes a diminution of the supply of blood to the right and left heart; and the decrease in the number of heart-beats during expiration—through stimulation of the terminations of the vagus in the lungs—causes a fall in the arterial blood-pressure.

It has been attempted to show the influence of respiration on the circulation by sphygmographic investigations. In these investigations during normal breathing, the increase of the heart beats during inspiration, and the decrease during expiration, is scarcely perceptible, but occurs very markedly during forced respiration, or when the respiratory movements are interfered with (Marey). It would seem that all the phenomena of the influence of the respiration on the circulation are explicable on mechanical grounds, except the changes in the number of heart-beats, which are of a nervous nature. The first proof of a reflex relation between the lungs and the heart was given by Hering, who showed that moderate inflation

(30 to 35 millimetres of mercury) of the lungs in dogs caused an increase in the number of heart-beats. The first effect was always a fall of the blood-pressure; the second, an increase in the number of heart-beats, and that to the extent of double or treble the number of beats before the experiment. As soon as the inflation of the lungs was interrupted, the acceleration disappeared. Hering came to the conclusion that the afferent nerve-fibres of the lung bear the same relation to the inhibitory cardiac centre in the medulla that the depressor nerve bears to the vaso-motor centre. Both centres appear to be in a state of excitation, which is diminished by stimulation of certain afferent nerve-fibres.

There can be no doubt that one might expect to find a similar relation between the lungs and heart in man. Dr. Sommerbrodt has analyzed more than one thousand sphygmograms of the radial artery, especially during the performance of Valsalva's experiment, and during the inhalation of compressed air. During Valsalva's experiment, three marked changes occur in the sphymographic curve: 1. When the expiration with closed glottis begins, the sphygmogram rises above the abscissa, then falls slightly, and rises again before the end of the experiment; 2. During the experiment, and for a few pulse-beats thereafter, the individual pulse-beats become dicrotic; 3. The heart-beats are accelerated during the experiment, and for a few beats after free respiration. The rapidity of the rise in the sphygmographic curve depends on the rapidity, force, and duration of the expiration. The dicrotic or hyperdicrotic condition of the pulse-beats is always present, and is the most important sign of a diminished tension of the arterial wall and a fall of blood-pressure. The acceleration of the pulse-beat is always most marked in the latter half of the experiment, and the increase may reach 75 per cent. of the original number of beats.

With regard to inhalation of compressed air, its effects are twofold: first, purely mechanical; and, second, a reflex nervous action. The mechanical effects —apart from the ventilation of the lung and the gymnastics of the lung—are these. After a minimal increase, the blood-pressure in the aorta is much diminished, venous blood accumulates in the extrathoracic veins, the lesser circulation is thereby relieved, and the arteries become emptier. The reflex nervous effects are shown in the acceleration of the heart-beats, the diminution of the tension in the arterial wall, and the fall of the blood-pressure. Whilst the inspiration of compressed air is itself a hindrance to the circulation, its further effects exert a favourable influence on the circulation by accelerating the blood-stream. In cases of lesion of the valves of the heart, all of which hinder the circulation, inhalation of compressed air, as it favours the circulation, must be useful; and both Waldenburg and Sommerbrodt speak very strongly of its therapeutic effects in certain cases of valvular lesion of the heart.—*British Med. Journal*, June 25, 1881.

—

Nerve-plexuses of the Extremities.

Professors Ferrier and Gerald Yeo have recently contributed a valuable monograph on this subject to the *Proceedings of the Royal Society*. They prove that a plexus has a great functional significance, and does not merely represent a convenient arrangement for the distribution of nerves to individual muscles. They rightly insist on the determination of the effects of excitation or destruction of the individual roots of a plexus, as being the only possible method by which we can discriminate between the sensory and motor constituents of the nerve-trunks, or indicate their functional relations and distribution. In order to throw light on these questions by physiological researches which may be regarded as almost directly applicable to man, these physiologists have made a series of experiments on the motor roots of the brachial and lumbo-sacral plexuses. Excepting in the

absence of a branch to join the phrenic nerve, the brachial plexus is essentially the same in the higher quadrumana as in our own species. Reckoning the first lumbar as a thirteenth dorsal vertebra, and counting the last lumbar as a first sacral, then numbering the nerves in harmony with this arrangement, it is found that, in the old-world monkeys, the mode of distribution of the lumbar and sacral plexuses is the same as in man. In observing the effects of stimulation of exposed motor roots, after numerous precautions, attention was directed more especially to the resultant muscular combination, rather than to the mere number of muscles thrown into action; since the actions thus excited are all complex co-ordinated movements of great significance. It was found very difficult, when so many events are occurring simultaneously, to analyze each muscular combination into the individual factors at work; and, on that account, the muscles stated to be in action when any one particular root was stimulated, were only definitely registered as being thrown into action, under such a condition, after repeated observations, the suspected muscles being partially exposed when it was found difficult to be otherwise sure of their co-operation.

The movements resulting from stimulation of the individual roots of the brachial, lumbar, and sacral plexuses, appear to represent a highly co-ordinated functional synergy, and not mere contraction, more or less strong, of a given number of muscles, although many muscles are excited to contraction by more than one root, as previous observers have already discovered. The muscles thrown into action by irritation of each root being innervated, in most cases, by several nerve-trunks, it would appear that the plexuses which contiguous roots form with each other, serve to distribute the requisite motor fibres in different trunks to the various muscles engaged in each functional combination. Section of any motor root was found to paralyze, not the individual muscles involved, but their power of combination.

Irritation of the eighth cervical root, for example, caused firm closure of the fist, pronation and flexion of the wrist, extension of the forearm, and retraction of the upper arm; an action precisely imitated by pulling some object, hanging in front, downwards and towards the hip. Stimulation of the seventh cervical produced invariably a complex action, which brought the back of the hand against the nates. On irritation of the fifth lumber (the fourth, in man), the lower extremity was straightened directly backwards, in the position which immediately precedes the lifting of the foot to take another step forward in the act of walking. Although division of the roots above mentioned involved complete loss of voluntary exercise of the given combinations, it was found not to cause paralysis of the individual muscles contributing to each combination. This is what was to be expected, since many of these muscles are innervated by more than one root, and hence, though weakened, they might still act in other combinations in so far as they were supplied by other roots. Panizza has gone so far as to believe, from experiment, that there is no absolute immobility of a limb until every root is cut.

In conclusion, these experiments tend to show that the cervical and lumbar enlargements of the spinal cord are centres of these highly co-ordinated muscular combinations. We understand that important work, to elucidate this question, is at present being carried on by the same physiologists—work that may bear fruit of great physiological and pathological value.—*British Med. Journal*, June 25, 1881.

—

Physiology and Pathology of the Excretion of Urea.

In a prize essay on the Physiology and Pathology of the Excretion of Urea, Dr. H. Oppenheim (Pflüger's *Archiv*, B. xxiii. p. 446) endeavours to ascertain

the effects of food upon urea excretion. The observations detailed in this important paper were chiefly made upon the author himself, after the following manner. He was at pains to bring himself into such a condition that the quantity of urea excreted in the twenty-four hours remained nearly constant, and the urine and feces contained as much nitrogen as reached the body in the form of aliment. The urea-estimations were performed according to Liebig's method; and he believes that the results were free from the sources of error which, according to Pflüger, may occur in such analysis. During the first seven days, the quantity of urea excreted varied from 32 to 35 grammes in the twenty-four hours. The average hourly excretion of urea was 1.42 grammes. In the night (that is, in the hours after an albuminous meal) it stood at 0.13 gramme per hour over the average. The urea left the body in a solution which was never near saturation, but there was a distinct relation betwen the water and the urea excreted; so that, other things being equal, when the quantity of water passed was greater, the quantity of urea which it contained was also increased. The taking of coffee, while producing diuresis, caused a diminution in the quantity of urea, but along with this there was an increase in nitrogenous elimination by the bowel. Quinine caused an increase of the elimination of urea in the twenty-four hours to the extent of 4 grammes. This action began soon after taking the dose (2 grammes), and lasted for about twenty-four hours. The use of pilocarpin showed that the artificial production of great perspiration and salivation did not bring about any remarkable elimination of nitrogenous material from the body.—*London Med. Record*, June 15, 1881.

Materia Medica and Therapeutics.

Barium in Mineral Springs.

Dr. NEALE (*London Med. Record*), referring to the fact of the existence of barium in natural waters, says that we are not inclined to attach much importance to the presence of small quantities of barium in the Harrowgate waters, for several reasons; first, because their action (supposing it were to be considerable) must be greatly interfered with, when burdened with the presence of the large quantity of other salts. Next, the chloride of barium has been at times very extensively used, and in large doses; for instance, Hufeland used to give 4 to 5 grains of the crystallized chloride three or four times daily; and Lisfranc began with 6 and went on to 12 grains every hour, and at last gave 48 grains in one dose. Similar instances could be quoted, but we have said enough to show that probably the very small doses have not much operation. Further, chloride of barium and chloride of calcium had both fair trials, chiefly in glandular and scrofulous cases, but were both practically given up. Their effects were considered to be very similar, and some in those days thought that the calcium was more powerful than the barium. This, however, seems certainly not to be the case. Dr. Wimmer has called attention to the share which chloride of calcium may have in the operation of the Kreuznach and some other waters. We would venture to suggest that, as that salt is present in the Harrowgate waters in at least fifteen times the quantity of barium, it would be well worth Dr. Oliver's while to take up the consideration of the operation of a substance which occurs in so very tangible a quantity that its action must in all probability be stronger than that of the barium (*vide* Dr. G. Oliver's paper in the *Practitioner* for May, 1881, on "Barium in Medicinal Springs, with Special Reference to the Presence of it in some of the Harrowgate Waters").

Bromide of Ammonium in Whooping-cough.

As the result of five recently observed cases, KORMANN (*Jahr. für Kinder.*, Heft 1 and 2, 1880) asserts unhesitatingly that bromide of ammonium is more useful in whooping-cough than quinine. The bromide acts with greater certainty, and after a few doses (for young children, 5 centigrammes (¾ grain), for older children, from 25 centigrammes (4 grains), to 40 centigrammes (6 grains) every two hours) a marked improvement is observable. Should it be rejected by coughing, it must be repeated. There is only one contraindication to its use; and that is, when there is in addition chronic bronchial catarrh. The author was much struck by the wonderful efficacy of the bromide in whooping-cough, and is at a loss to understand the prejudice against it. In only a few cases was there marked drowsiness, and this was quickly overcome by suspending the remedy for a few hours. When the medicine is not retained, it should be abandoned, and tannic acid or quinine substituted, or an attempt might be made to give it in a syrup, or with liquorice. —*London Med. Record*, May 15, 1881.

—

The Action of Aconitine in Neuralgia.

M. DUMAS of Cette has been studying the action of aconitine in facial neuralgia, and comes to the following conclusions (*Journ. de Thérap.*). Crystallized aconitine is a powerful medicine. Very efficacious, especially in congestive facial neuralgia, and in some other forms of neuralgia *à frigore*, it is useful in the majority of catarrhal affections, in which it may replace the various preparations of aconitine. It deserves to be preferred over the other kinds of aconitine, which are ill-defined and unequal in their action. It is but slightly efficacious in tic-douloureux of the face, in which it only produces temporary sedative effects. As with the other alkaloids, it is tolerated when it is methodically administered. It may be long continued, without fear of the effects of an accumulation in the organism. It should be commenced in small doses and progressively increased. Unless in cases of tic-douloureux, the average dose should be restricted to two milligrammes daily. Carefully prepared granules containing a quarter of a milligramme (.0038 grain) of the alkaloid, or half a milligramme (.0077 grain) of the nitrate, deserve preference.—*London Med. Record*, June 5, 1881.

—

Aconite in Remittent Fever.

Dr. BOMFORD (*Practitioner*, March, 1881) records three cases of remittent fever treated with aconite. In its general course and uncertain duration, remittent fever somewhat resembles acute rheumatism, and especially on the West Coast of India is not uncommonly accompanied by slight inflammation of the joints. In the first of Dr. Bomford's cases, the patient, an officer, aged 20, had for four days been treated with large doses of quinine, but without effect, there being a daily exacerbation of fever at 3 P. M. On the fifth day the symptoms had increased in severity; the patient was sleepless, his tongue dry and glazed, skin dry, temperature in the axilla 103 deg., and pulse 88. The quinine was discontinued, and he was given one minim of tincture of aconite at 3 P. M., the dose being repeated every quarter of an hour until 4.30; it was given again at 5, and then every hour until 9. On the following day he was much better; he had slept well, his tongue was moist, the appetite was returning, the temperature was 100.4 deg., and the pulse 82. The tincture of aconite was again given in minim doses at 10.30 and 11 A. M., and then every hour until 7 P. M. At 3 P. M. there was free perspiration, temperature 99.5 deg., pulse 66. At 9 P. M., 97.5 deg., pulse 62. He had no relapse, and a week later returned to duty. The

other cases are similar and equally striking. The author considers that the good effects of aconite in this class of fevers may be summed up as follows: 1. It reduces the temperature. 2. It reduces the rapidity of the pulse, and makes it full and strong. 3. It cleans the tongue, and restores the digestive functions. 4. It induces sleep. 5. It increases the quantity of the urine, and seems to have a direct effect in removing the symptomatic congestion of the kidneys. 6. It promotes perspiration. Dr. Bomford has often given aconite, sometimes for days together, to typhoid cases to clean the tongue and induce sleep. If pushed, it will reduce the temperature, but only slightly. The fall of temperature is not always accompanied by profuse sweating, and cannot be explained on the "heat-loss" theory as being merely the result of evaporation of the sweat. There can be no doubt that aconite acts best when given in frequent small doses.

Dr. William Murrell, of London, in commenting upon the above communication in the *London Medical Record*, makes the following practical remarks in regard to the administration of aconite in fever: "The author is quite right; aconite does act best in small doses, frequently repeated. Many practitioners get no good from aconite because they do not know how to use it. The dose of the tincture recommended in the *British Pharmacopœia*—from 5 to 15 minims—is absurdly large, and no one with any respect for his patient's safety or his own reputation would ever think of giving it. The best way is to put half a drachm of the tincture in a four-ounce bottle of water, and to tell the patient to take a teaspoonful of this every ten minutes for the first hour, and after this hourly for some hours. Even smaller doses may be given in the case of children. The great indication for the use of aconite is elevation of temperature; the clinical thermometer and aconite bottle should go hand-in-hand. If properly used, aconite is one of the most valuable and indispensable drugs in the *Pharmacopœia*."

—

The Arsenical Treatment of Chorea.

Arsenious acid is strongly recommended by Dr. SAWYER (*Brit. Med. Journ.*, Dec. 18, 1880) as being by far the best remedy for chronic chorea; and it is pointed out that the dose of liquor arsenicalis, as laid down in text-books, is too small. The quantity given should be cautiously increased. One exceptional case is mentioned, in which the dose was experimentally increased until as much as a drachm of Fowler's solution was given thrice daily, apparently with good effect on the chorea, until signs of gastro-intestinal irritation were produced.—*London Med. Record*, June 15, 1881.

—

Atropia in Vaseline.

Dr. KLEIN, of Vienna, recommends, in place of the ordinary solutions of atropin, to use an ointment prepared as follows: Sulphate of atropia, $\frac{3}{4}$ gr.; vaseline, 160 gr. If the atropin salt be thoroughly triturated with the vaseline, it is unnecessary to use any solvent. The application of this ointment is much easier than the instillation of the solution. It is best applied by means of a camel's-hair brush to the inner surface of the lower eyelid pulled down.—*London Med. Record*, June 15, 1881.

—

Atropia as a more Effectual Remedy than Extract of Ergot in Menorrhagia and Hemoptysis.

TACKE (*Berl. Klin. Wochen.*, No. 6, 1881), having injected sulphate of atropia subcutaneously for eczema in a female patient ($\frac{1}{50}$ grain twice daily in distilled water for two days), noticed that the menses, which had been very profuse, became moderate, and remained so. The same result he has seen follow five

times in two other patients, and in a case of hemorrhage from the lungs the hemorrhage twice ceased immediately on the injection. He holds that as a remedy for visceral hemorrhage it is preferable to extract of ergot: 1st, on account of its certainty, and 2d, because, in the strength used by him (about $\frac{2}{3}$ grain to an ounce of distilled water), it does not cause the inflammation which almost invariably follows the subcutaneous injection of extract of ergot.—*Lond. Med. Record*, April 15, 1881.

—

Administration of Cod-liver Oil.

Mr. FAIRTHORNE (*Pharmaceutical Journal*) suggests a new method of taking cod-liver oil, which consists of adding two drachms of tomato or walnut "catsup" (according to a new contemporary, the accurate and most appropriate orthography), to each ounce of the oil, the mixture being shaken before taken. He very pertinently remarks that taking an ordinary emulsion of cod-liver oil is like eating cod-fish or lobster with a dressing of sugar and gum. He has found the mixture of catsup and cod-liver oil to agree with many persons much better than in any other form in which cod-liver oil had been taken, and this he attributes to the association of substances generally employed as additions to food bringing into operation those digestive faculties of the stomach which might otherwise remain dormant when such incongruous substances as sugar, and one of the principal ingredients of fish, are introduced together into the stomach. Some years ago a paper was published in one of the scientific journals, showing that the condiments usually employed with particular kinds of food were the most appropriate ones, since they developed an electrical current, a phenomenon which did not appear to be indicated by the galvanometer when what would be considered by epicures to be incongruous articles of food were experimented with. Possibly the action of different adjuncts to food on the nervous system, and through it on the digestion, may deserve more attention than is generally devoted to that subject. Mr. Fairthorne also states that the following mixture is readily taken by the patient: Liebig's extract, $\frac{1}{2}$ ounce; extract of celery seed, $\frac{1}{2}$ fluidrachm; vinegar, 1 fluidounce; water, 2 fluidounces; cod-liver oil, 5 ounces. The extract of beef is dissolved in the water, the vinegar and oil are added, and the whole shaken with the extract of celery.—*British Med. Journal*, April 2, 1881.

—

Tetanus treated by Calabar Bean.

The case of a boy, aged 11, is related in the *Lancet*, Jan. 29, 1881. Tetanus followed a lacerated wound of the heel. Chloral and belladonna in full doses were first tried, but the patient became worse, and was presently unable to swallow his medicine, convulsive attacks being brought on by each attempt. Subcutaneous injections of morphia also caused convulsions and did no good. Gelatine lamels, containing one-sixtieth of a grain of extract of Calabar bean in each, were next obtained. One was given every four hours, being slipped between the teeth and allowed gradually to dissolve in the mouth. Improvement was noted two days later. The lamels were continued for seven days, by which time the boy was convalescing satisfactorily. He has since completely recovered. The case was an extremely unfavourable one at the time when the administration of Calabar bean was commenced. The boy's age, and his ability to take plenty of nourishment throughout his illness, were of course greatly in his favour, but the result affords a fair presumption that the drug had a beneficial effect. It, therefore, deserves a further trial (in the form of gelatine lamels) in similar cases.—*Lond. Med. Record*, June 15, 1881.

Resorcin in the Treatment of Cholera Infantum.

Andeer, of Würzburg, having asserted that resorcin ($C_6H_4(OH)_2$) has a marked antifermentative and antiputrefactive action, Dr. TOTENHÖFER, of Breslau, was induced to try it in an epidemic of cholera infantum during the summer of 1880 (*Breslauer ärztl. Zeitschr.*, 1880, No. 24). Of 91 children treated as out-patients in this way, there died 17. Of these last, three died from complications (pneumonia, croup, and meningitis); deducting these, the mortality was 15.4 per cent., against 34.4 and 30.7 per cent., the two previous years. The writer attributes the following actions to resorcin: 1. The vomiting ceases. 2. Symptoms of collapse are neither caused nor increased. 3. The number of stools is diminished. 4. Resorcin is not so irritant as carbolic acid, but quite as antimycotic. 5. It is readily taken without any corrigent, and is well borne. 6. It brings about rapid absorptive action in the stomach and intestine. Andeer gives adults internally a solution of 15 to 30 grains in 3½ ounces of water; and in accordance with this the drug was administered to children during the first months of life, in a solution of 1½ to 5 grains in 2 ounces of infusion of chamomile. Soltmann, in whose clinic the treatment was carried out, gives subcutaneous injections of ether when collapse is present, before commencing the resorcin treatment; in cases of peritoneal irritation after removal of collapse, resorcin with one to three drops of tincture of opium.—*London Med. Record*, June 15, 1881.

—

Tannate of Quinia in Whooping-Cough.

In 1867 BINZ (*Berl. Klin. Woch.*, No. 9, 1881) was induced on theoretical grounds to employ quinine in the convulsive cough of children, other drugs having frequently failed in his hands to give relief. He found it most effectual in alleviating the violence and duration of the paroxysms of whooping-cough. The attacks became less frequent and less severe, and the vomiting ceased. When quinine was given quite at the commencement of the illness, the spasmodic element was suppressed, and the attack assumed the form of a severe, though manageable bronchitis. To obtain these good results, it is necessary to give the remedy with no sparing hand. Twice a day the patient must take as many decigrammes as he is years old (a decigramme is a grain and a half), so that a child four years old would require 6 grains at a dose; at ten years of age he would want 15 grains; at fourteen, 21 grains, and so on.

The treatment must be steadily persevered in, for no immediate effect is observed. As a rule, there is no improvement until the patient has taken the full dose for three or four days, but then the progress is rapid. These results have been confirmed by one of Binz's pupils, JANSEN (*Klin. Beiträge zur Erkenntniss und Heilung des Keuchhustens*, 1868), and by HAGENBACH (*Correspondenz für Schweizer Aertz.*, 1881, and GERHARDT'S *Handbuch der Kinderkrankheiten*, 1877), who, as director of the Children's Hospital at Basel, has had many opportunities of investigating the subject. Hagenbach considers that, in the treatment of convulsive cough, quinine must be awarded the foremost place. The difficulties—at times insuperable—of inducing children to take such a bitter medicine as quinine, have been overcome by using the tasteless tannate of quinine. During a severe epidemic of whooping-cough in the neighbourhood of Rheindorf, Dr. Becker used this preparation with the greatest success. Hagenbach, in corroborating Becker's statements, says that it is best to give the tannate of quinine as early as possible, the dose being twice a day as many decigrammes as the child is years old. In his experience, the attacks have in a few days considerably

abated, and the vomiting has ceased. He also used it with considerable success in the ordinary catarrhal affections of children. It is best given in a little sugar and water. In only one case did it induce constipation, whilst, in another, it arrested an attack of diarrhœa. Unfortunately, tannate of quinine is a very uncertain preparation, containing at one time 10 per cent., and at another 25 per cent., of the alkaloid. On this account it is a good plan to use the neutral tannate of quinine, made by precipitating the alkaloid with tannate of ammonia. The great objection to the employment of these salts is their expense, but there is good reason to suppose that they will soon be obtained by a new chemical method at a more reasonable rate.

It would appear that quinine produces its beneficial effects by a specific action on the organism which causes whooping-cough; salicylic acid and carbolic acid acting in the same way. Chloral-hydrate probably acts by lessening reflex action, and we know that its effects on the spinal cord are so marked that it is used as an antidote in cases of strychnia poisoning. The great objection to chloral in whooping-cough is, that it soon loses its effect unless the dose be increased. With quinine this is not the case; and, although it acts slowly, it is certain. It exerts no direct action on the nerves, but gradually destroys the poison itself. No hesitation need be felt in increasing the dose of tannate of quinine if necessary.—*London Med. Record*, May 15, 1881.

—

Use of Thymol in Burns.

Dr. FULLER, of Neukirchen, a mining district in which burns caused by explosions or fire damp or powder are frequent, has adopted a mode of treatment of burns by thymol, which he has found attended by most favourable results (*Hom. Rundschau* and *Therapeutic Gazette*). Each patient, as soon as admitted to the hospital, receives a warm bath. The burnt surface and its surroundings are then washed with an aqueous solution of thymol (1 to 1000), followed by the application of thymol spray for several minutes. The blisters are not disturbed, but are handled with extreme care. The raw surface is then painted with a one per cent. thymolized linseed oil. The patient is then laid on a waterproof mattress, the temperature of the room being kept comfortably warm. Particles of coal or other foreign matter, if not too minute, are, as a matter of course, at once removed. It is often very difficult to so lay the patient that the burned places are relieved of pressure, and it is frequently necessary to allow him to remain in a sitting posture, sometimes for several days, with support for the chin, or even *a la vache*, by suspending him by means of wide strips of muslin, passing under the chest or abdomen—the strips being fastened above. The application of thymol should at first be repeated every ten minutes; and as it relieves pain very remarkably, the patients themselves call for it. For this purpose large soft-haired paint-brushes are used. At first the oil is absorbed somewhat rapidly, and as soon as this has occurred a sensation of intense burning follows. The applications are gradually made less frequently; as an indication of their necessity, the appearance of the skin is sufficient. As soon as the oil is entirely absorbed, it should be replaced by a fresh portion, as it is important to prevent contact with the air. During the first few days the thymol spray is also applied as often as possible, which does much toward alleviating the pain.—*Lond. Med. Record*, June 15, 1881.

Medicine.

The Nature of the Infecting Agent in Diphtheria.

In an unusually interesting paper in the *British Medical Journal* for July 2, 1881, Dr. MICHAEL W. TAYLOR, of Penrith, discusses the Fungoid Origin of Diphtheria, especially as shown in an isolated outbreak in which dampness appeared to act as a favouring cause. In regard to the special agent he offers the following solution of the question:—

"The results of the investigations of scientific pathologists, during the last fifteen years, all tend to further the broad theory, that 'all contagia are probably particulate,' and that the infective particles enjoy endowments not known to exist otherwise than in association with life and organization; and, moreover, microscopy and experimental inoculation have incontestably demonstrated the presence of distinct specific vegetative forms in the contagious liquids of at least four contagious diseases. These are smallpox, sheep-pox, splenic fever, and relapsing fever. It has been shown—first, that the minute organisms discovered infiltrating the tissues and blood in these diseases, which have been described, according to their form and structure, as the micrococcus, bacillus, spirilla, etc., are not congeneric with the animal body in which they are found, but are apparently of the lowest vegetable kind; and, secondly, that they constitute the essence, or an inseparable part of the essence, of the contagia of these diseases.

"It has been proved, so late as the present year, by Toussaint, of Toulouse, that the very infectious disease amongst poultry, called the *cholera des poules*, consists of a minute bacterium, which is capable of cultivation out of the body, in chicken-broth; and it has been long known that the epizöotic parasite which infests the silk-worm, and the house-fly, is a mould with fungal threads and mycelium, which is almost identical with oïdium, or peronospora, so well known in connection with the potato and vine plagues.

"Thus we see that the progress of modern research justifies the conclusion, that the vastly multiplied minute organisms and vegetable sporules, inducing and produced by the ordinary processes of fermentation and putrefaction going on in nature, may be absorbed into the blood of animals, or be engrafted on their tissues, so as to assume an intimate relationship with many of the diseases most fatal to human life. Hence there is really nothing startling nor singular in the proposition I enunciate, that the diphtheria in this particular instance had its origin in some of the fungoid sporules which infested this chamber.

"In the year 1858, Professor Laycock, of Edinburgh, put forth the theory, that diphtheritic exudation depended on 'oïdium albicans,' or potato fungus;[1] the same conjecture was supported by Dr. Wilks and others;[2] long before which—in 1844—Gruby, of Paris, and afterwards Ch. Robin, had shown, by the microscope, that in the pseudo-diphtherite, or muguet, and in thrush, the buccal pellicles displayed the tubular filaments and mycelium of a vegetable form analogous to the oïdium. This hypothesis, however, in regard to true diphtheria did not receive acceptation, in consequence of the general failure at that time of sufficient microscopic evidence, in the false membrane itself, of the presence of vegetable growths.[3] The more recent researches, however, of Nassiloff and

[1] Lancet, 1858. Laycock, Lecture on Diphtheria.

[2] Medical Times and Gazette, vol. xxxviii. On Diphtheria and its connection with a Parasitic Vegetable Fungus.

[3] Since I have been engaged with this paper, I find from a communication kindly forwarded by the Rev. John E. Vize, M.A., Forden Vicarage, and published in 1880, that this able fungologist has strongly maintained the dependence of diphtheria on an oïdium.

Oertel in Germany, Leloir in France, Burdon Sanderson, and other workers in scientific pathology, show that pharyngeal diphtheria is a true mycosis, or infiltration of living tissue with micrococci, and that the development of these minute spheroids is intimately associated with the morbid process. It has been found that the pseudo-membrane consists of layers of stratified epithelium, more or less mingled with products of exudation from blood-plasma and some micrococci, but that, in the mucous and submucous tissues, the channels communicating with the lymphatics are filled with granular matter, which is mainly micrococci, or masses of vegetation; so that observation has tended to establish a certain analogy in the morbid processes of diphtheria with those in the respective diseases I have mentioned—splenic fever, or woolsorters' disease, for example, which we know to be produced by vegetable sporules existing outside of the body.

"As was well shown by Sir James Paget, in his masterly address at the Cambridge meeting of the Association, some of the obscure processes of human pathology are capable of receiving much elucidation from a comparative study of diseases in plants, and of the action of parasites on the vegetable kingdom. We have described to us, by the practical mycologist, an infinite multitude of distinct structural forms of fungi, each of which has its own habitat, and affects certain sites of decaying vegetable or animal matters, or preys on certain living species or natural orders of plants; each has its own feeding ground. We cannot advance far in this study without being struck with the marked parallelism which exists between the action of the parasitic spore in producing local and general morbid changes in the plant, and the action of a bacillus, or oïdium, affecting animal tissues. The resting-spore, let us say, of the peronospora infestans, capable of resisting the hardest winter frosts, and the greatest heats of summer, lies dormant underneath the ground, until the time of germination arrives; its habitat, or feeding-ground, is the potato; at the proper season it meets with a tuber; it attaches itself to the skin by its little lash-like appendage; it germinates there; it starts out its rootlets into the parenchyma of the tuber—this is its mycelium; it branches and penetrates in all directions; it poisons the tissues; the plant looks sickly; the stalk withers, and the leaves blacken; it has fulfilled its end, the reproduction of its kind. So, when the leaves of phanerogamous plants are attacked, the zöospores of the fungus gain entrance by the stomata, throw out their mycelium through the cellular tissue of the leaf; the thread-like filaments burrow underneath in search of food; whilst the epidermis is raised like a blister, and perishes and exfoliates, just as does the epithelial false membrane from a diphtheritic throat. No theory in regard to the essential cause of diphtheria explains so well many known facts in its history as that of its fungoid origin. For example, the persistence of vitality in the so-called resting-spores of fungi lying dormant in drains, or amid heaps of putrescible matter, for an indefinite time after an outbreak, affords a ready explanation why the disease so often inveterately clings to certain dwellings and localities."

—

Hay Fever.

M. DE BUDBERG, in a communication to the Société Vaudoise de Médecine, calls attention to the value of the method of treatment devised by Helmholtz, which is less widely known than it should be. The first case was observed by M. de Budberg in an Englishwoman, who had suffered from it for twenty years. The treatment employed consisted of nasal irrigations of solution of quinine, recommended by Helmholtz (1 part in 750 of water). This irrigation brought away masses of brownish mucus, in which were found small round yellow corpuscles, of smaller dimensions than the blood-corpuscles. It did not contain either vibrios or bacteria. After two or three douches, the patient was perfectly well. The

attack was arrested from that time. A solution of chlorate of potash was employed, and no relapse occurred, although the patient frequently passed flowering meadows. Every time that she attempted to suspend the treatment, a relapse occurred, which, however, was promptly ameliorated by the use of the douche. M. de Budberg thinks that the yellow corpuscles found in the nasal mucus of this lady were pollen-corpuscles. The nasal douche freed the mucous membrane from them; hence its curative effect. In cases in which the mucus contained bacteria, Helmholtz's solution of quinine would probably be indispensable. In all cases, it is necessary that the douche should be made most carefully, so as to entirely wash out the whole of the nasal mucous membrane. Dr. Blackley, in his excellent monograph, relates that he induced hay fever in his own person by the introduction, on the nasal mucous membrane, of various kinds of pollen. He cites more than sixty different kinds of them—as a rule, graminaceous pollens.—*British Med. Journal*, July 2, 1881.

—

Treatment of Enteric Fever by Prolonged Lukewarm Baths.

For many years the reduction of the pyrexia of fevers by cold or lukewarm baths has been the subject of careful and extended inquiry both in this country and in Germany. Among those who have done much useful work in the investigation are Brand, Ziemssen, and Riess, while Dr. Wilson Fox's accurate and interesting observations on the reduction of the pyrexia of acute rheumatism have added much to our precise knowledge of the immediate and subsequent effect of such baths. The methods of the first three observers differ considerably. Brand uses largely, and more especially in severe cases, the general cold bath, cold affusions, and cold wet packings, the water being at a temperature of 50° F., and the affusions being continued for a quarter of an hour or thereabout. Ziemssen's method consists in placing the patient in a bath at 95°, which, in the course of half an hour or so, is gradually cooled down to 60°. He uses the cold wet packing as an adjuvant to the baths.

Riess's method (*Centralbl. für die Med. Wissen.*, July 24, 1880, p. 545) differs from both these in the duration of the bath, and also in the fact that the water is kept at a constant lukewarm temperature. His procedure is as follows: On the day succeeding the admission of a typhoid patient with high temperature, he is placed in a bath at 88° for twenty-four hours. The duration of the bath in the following days depends on the rectal temperature. So soon as the temperature reaches 101.5° the patient is placed in the bath, which is interrupted at 99.5°, until the temperature again rises to 101.5°. Riess claims for this treatment that it not only keeps the temperature in typhoid patients almost normal, but also that, under it, delirious and comatose patients return to full consciousness and gladly remain in the bath.

Notwithstanding the excellent results obtained by Riess, few test trials of this method have been published, and accordingly the detailed observations by Afanassieff (*St. Petersb. Med. Woch.*, 1881, No. 7) of seven cases of enteric fever, treated by prolonged lukewarm baths, are possessed of some interest. In certain respects, Riess's method was not fully carried out. From circumstances of hospital convenience the bath lasted in general only three hours, being repeated twice daily if necessary, that is, if the rectal temperature rose above 101.5°. Sometimes, also, the baths were of a higher temperature than 88°, in one or two cases as high as 95°. As to the general course of the disease in these seven cases, two were specially severe, but in none was the "typhoid" condition developed. Consciousness was clear, headache slight or absent, and sleep good throughout the whole period of the use of the baths. The tongue was seldom coated, mostly clean and moist, and all the patients preserved a good appetite

throughout the disease. Pain in the region of the cæcum and meteorism were generally present, but required no special treatment. Marked diarrhœa was not present in any of the cases, and the bowels were regularly and naturally opened. Two cases had bronchitis, passing over without treatment. The number of baths given was 114, of which 100 lasted three hours; 14 a longer or shorter time. As regards reduction of temperature: on two occasions the reduction was 5.8°; on seven, approximately, 5.5°; on twenty-one, 4.5°; on thirty-four, 3.5°; on twenty-four, 2.5°; on twenty-three, 1.5°; and on three, 1°. The last two classes were mostly those in which the baths lasted for only half an hour or an hour, the rectal temperature being only 101.5°. The temperature was taken in the rectum before and after the bath; and we must here note a practical point of which the observer seems to have been unaware. The temperature immediately after a bath by no means necessarily indicates the reduction of temperature accomplished by it; for Dr. Wilson Fox has shown, from his cases of acute rheumatism, that the temperature may continue to fall six or more degrees, forty or fifty minutes after the termination of the bath.

The conclusions arrived at by the observer are these: 1. The usual reduction is from 3° to 4.5°. 2. In the later stages of enteric fever, the temperature yields more readily than at first. 3. The temperature sinks more readily in the evening than in the morning, the greatest reduction in the evening among his cases being 5.8°, while the greatest in the morning was 4.5°, both these meaning, however, a reduction to almost the normal temperature. The pulse and respirations also sank in number under the use of the bath. The fall in the pulse was in strict relation to the fall of temperature, the diminution being 20, 50, and in some cases even 70 and 90 per cent. The author considers the treatment well suited for hospital cases, and points out that the attitude of the patient in the bath ought to be as comfortable as possible, for which he recommends a waterproof mattress, covered with a sheet, and a movable pillow attached to the frame of the bath.—*London Med. Record*, May 15, 1881.

—

The Simulation of Typhoid Fever by Acute Tuberculosis.

Dr. SENATOR contributes to the *Berliner Klinische Wochenschrift*, No. 25, an article bearing on this subject, in which he relates a case of acute miliary tuberculosis that during life was supposed to be typhoid fever. The patient was a man aged forty-eight, who, three years before coming under observation, had gone through a severe attack of typhoid. During its third week a very stubborn and intractable hiccough came on, which lasted eight days. There had also been attacks of epistaxis, with hawking up of blood-stained mucus from the posterior nares; but he quite recovered. He subsequently broke his arm, and again recovered without further trouble. His last illness commenced, about five weeks before he came under Dr. Senator's care, with slight shiverings, malaise, depression, and dyspnœa, which obliged him to keep his bed for a few days. When taken into the hospital he was observed to be a fairly well-built man, well nourished, without cachexia, and with a good family history. There were no abnormalities in the circulatory or respiratory apparatus. After some days the spleen was felt to be enlarged, and several roseola spots showed themselves; then epistaxis came on, and some pulmonary catarrh also; and later, hiccough and slight deafness. About three weeks after admission some inflammation and suppuration occurred over and about the left parotid gland, sanious and fetid pus being discharged. The temperature varied from 100° to 104° Fahr. The patient then died. In view of the enlargement of spleen, the fever, and the roseola, a diagnosis of typhoid was made. The man, it is true, had once before passed

through an attack of typhoid, but authentic cases are recorded where an individual may have the disease twice. Moreover, the occurrence of epistaxis and hiccough (which were marked symptoms during the first attack) occurred during his last illness. Finally, the occurrence of a suppurative parotitis seemed to favour the typhoid view. But at the autopsy, not only were there no appearances of typhoid—there were not even any traces of the previous attack. On the other hand, there was a general tuberculosis of both lungs, with enlargement of the bronchial glands. The spleen, the liver, and both kidneys were also tuberculous. —*Med. Times and Gazette*, July 2, 1881.

—

Massive Pneumonia.

GRANCHER was the first to point out the existence of a variety of pneumonia which showed most of the clinical symptoms of pleuritic effusion, and which deserved the special epithet of massive. Recently, two cases of this kind were observed at Professor Lasègue's clinic (*Archives Générales de Méd.*, Feb. 1881). The first was that of a labourer, aged 50, who developed an acute pneumonia. Examination revealed absolute dulness in front and behind on the right side. At the base and in the axillary region, resonance was still found; in the supraspinous and infraclavicular regions, absence of respiratory *bruit;* in the intraspinous region fine moist râles, but neither crepitant nor subcrepitant. Bronchial breathing was very marked at the inferior border of the scapula, extending from the axillary line to the vertebral column. Below this point there was a faint vesicular murmur, distant in sound and largely masked by sonorous *râles*. In front, similar conditions existed, but there was no respiratory murmur. On the left side there were apparently only the signs of bronchitis. There was little cough, and the expectorated matter was not characteristic of any special lesion. The febrile movement was not severe. The patient died soon after admission to the hospital. At the necropsy, the upper lobe of the right lung was found completely hepatized, having assumed a dirty yellowish colour. The other lobes and the left lung were not greatly altered; but the pathological condition which led to the clinical diagnosis of massive pneumonia was found to reside in the bronchial tubes distributed to the upper lobe. They were completely filled to their finest ramifications with a white, elastic, apparently fibrinous substance, which was not found elsewhere. Other cases are cited, and the writers, MM. Beurmann and Brissaud, finally conclude that, although massive pneumonia may at some time during its course closely resemble in its clinical aspects pleurisy with effusion, yet in certain cases bronchial breathing coexists with the dulness on percussion. This respiratory sound will be likely to exist at the beginning of the malady, when the fibrinous exudation has not yet advanced to the root of the lungs. In doubtful cases, an exploratory puncture would appear to be justified.—*London Med. Record*, June 15, 1881.

—

Progressive Painful Inflammation of Arteries.

Mr. J. H. MORGAN, in a paper read before the Clinical Society of London (*British Medical Journal*, April 23), describes the case of a middle-aged man, who during some years suffered at intervals from pain extending gradually from the trunk along the course of some of the main arteries, viz., both brachials, a carotid, a femoral, and extending from it to the arteries of the leg. The retinal vessels were very unusually small, indistinct, and exhibited a double contour. There was at no time any evidence of embolism. He contracted syphilis when eighteen years of age. The symptoms, according to the author, pointed evidently to disease of an artery, probably inflammation of the fibrous coat, since the pain

passed from the centre to the periphery, was in the course of the various arteries, and was made intense by pressing upon the artery affected.—*London Med. Record*, June 5, 1881.

—

Cardiac Lesions in Locomotor Ataxy.

Dr. LETULLE publishes (*Gaz. Méd. de Paris*, 1881) two cases of locomotor ataxy, in which he met with cardiac lesions, already pointed out by M. Grasset of Montpellier. In the first of these cases, the patient, who died suddenly, had atheromatous lesions of the aorta and inefficiency of the aortic valves; in the other, there were also complex lesions of the aortic opening and mitral lesions.—*London Med. Record*, June 15, 1881.

—

Tuberculous Pericarditis.

Tubercular inflammation of the pericardium is a very rare lesion. Laennec only met with two instances of it, and Louis but one. Although cases have been from time to time recorded in medical literature, their total number is not large. Gray granulations in the pericardium have been met with in cases of general tuberculosis in children, unaccompanied by actual inflammation, but the condition of tuberculous pericarditis is most uncommon. An instance of the affection in a girl of nineteen has been lately recorded by Dr. VAILLARD in the *Journal de Médecine de Bordeaux*. The patient died from tubercular meningitis, with extensive enlargement and caseation of the lymphatic glands. The parietal and visceral layers of the pericardium were connected by soft adhesions, and each was covered by false membrane; the visceral layer was studded with granulations and small nodules of caseous tubercle. At a distance from these nodules the microscopical examination showed the proper tissue of the membrane to be somewhat thickened and continuous with a new membrane on the surface, which was almost perfectly organized. Sections through the yellow tubercles showed, even in the thickness of the visceral layer, a small oblong caseous mass, permeated by the remains of tracts of fibrous tissue in process of destruction. No giant-cells were seen in it. Around this caseous centre was a layer of embryonal cells, most marked in the deep layer of the serous membrane. Over the nodule extended the false membrane already described. The subjacent muscular fibres of the heart were fattily degenerated.

From the comparison of a considerable number of cases of tuberculous pericarditis, Vaillard concludes that it is much less common to meet with effusion than with the dry form, the latter having been met with twenty-seven times out of thirty-seven cases; in only ten was there effusion, of a citrine yellow or sanguinolent aspect. In all the cases of dry pericarditis, with one exception, there was complete adhesion of the two layers of the pericardium. Hence it would seem that adhesion is the habitual termination of this variety. The surfaces are covered by false membranes, in which the tubercles are scattered, as well as in the serous membrane proper. Tubercular granulations may, however, develop in the proper connective tissue of the myocardium, and Fauvel has even traced them through the whole thickness of the wall of the heart up to the endocardium. In the less frequent cases in which there is effusion, this is usually abundant, and may vary from 700 to 1600 grammes (Proust), and even 2800 grammes (Richard). This large effusion is so characteristic of the variety that, given a case of chronic pericarditis, the tubercular nature of the inflammation may be suspected from this characteristic. The layers of the pericardium present changes similar to those met with in the dry form, but the false membranes may undergo degeneration and ulceration, so that ulcers form similar in appearance to the specific

ulcers of the intestine. The question has been discussed whether the formation of tubercles is primary and the inflammation secondary, or whether the opposite is the order of events. Cruveilhier, Empis, and Niemeyer have expressed doubts as to the occurrence of tubercles in uninflamed pericardium; and, according to them, the formation only occurs in the depth of the newly-formed false membranes. The facts of the question have often been difficult to ascertain, in consequence of the close adhesion of the false membrane and serous layer, so that it is not always easy to say where one ends and the other begins. But many cases have been observed in which tubercles were seated in the thickness of the serous membrane without any trace of inflammation, as in a case in which, the patient having died from acute tuberculosis, miliary granulations were found on the parietal layer, and three similar nodules on the surface of the visceral layer. This renders it probable that, in some cases at least, the formation of tubercles is primary and the inflammation secondary. But it does not follow that this is the invariable order of events; a simple pericarditis may be the occasion of the growth of tubercles in the inflammatory products.

The dry adhesive form of pericarditis is often overlooked during life. Its course is latent, and pericarditis not being expected in the course of phthisis, it is often discovered only at the autopsy. Any dyspnœa which it causes is obscured in the greater dyspnœa due to the condition of the lungs, and when adhesions form friction disappears. The occurrence of effusion renders the symptoms more obtrusive, so that this form is usually recognized during life. If there are no lung symptoms it may be difficult even to suspect the nature of the pericarditis, but a correct diagnosis is, in these cases, of great importance, since the pericarditis is occasionally the first local manifestation of tuberculosis, as in cases which have been recorded by Virchow, Proust, and Richard.—*Lancet*, May 28, 1881.

—

The Phenomena of Neuro-muscular Superexcitability during Hypnotism.

MM. Charcot and Richer, in a contribution to the study of Hypnotism in Hysterical Patients (*Le Progrès Médical*, Nos. 15, 16, 1881), draw attention to the phenomenon of exaggerated excitability of the nerves and muscles during certain forms of induced sleep. This phenomenon includes (1) great increase in the tendon-reflexes; percussion on a tendon giving rise to movements not only in the same limb but in the others, to sharper reflex contraction, to prolonged contraction, and to permanent contraction; the contraction may be brought about by kneading, friction, or simple pressure; (2) increased nervous excitability; pressure on nerve-trunks giving rise to spasm of the muscles to which their branches are distributed; (3) increased muscular excitability; pressure on a muscle causing it to contract; (4) a special increased excitability of the muscles of the face, which cannot be thrown into permanent spasm, but may be excited in any of the foregoing ways, and even by simply pressing each one with a small piece of wood, by which means they reproduced most of the experiments of Duchenne of Boulogne, on the partial action of the muscles of the face under the influence of localized faradisation.

The contraction resulting as above described is generally very intense, resisting the most forcible efforts to overcome it, but it may be made to yield, without force, by simply stimulating in the same manner the antagonist group of muscles. When the contraction is not destroyed during the hypnotic sleep, on awakening the patient, the contraction may disappear with the sleep; or it may persist after waking, if we render the patient cataleptic and awaken her during that state; or it may in some cases persist whether the patient be awakened during either the lethargic or the cataleptic state. Such persistent contractions resemble those of

hysteria; and for their reduction it is necessary to hypnotize the patient again, and then to excite the antagonist muscles.

The transference of artificial contraction by means of the magnet is well known, since the experiments at the Salpêtrière in 1878; but it was not known whether such transferred contraction affected exactly the same muscles as were involved in the primary contraction. One of the patients of MM. Charcot and Richer having been hypnotized, and her muscles completely relaxed, the ulnar group were stimulated by touching the right ulnar nerve at the elbow, and a magnet was then applied to the left arm, the muscles of which remained relaxed; at the end of two or three minutes the fingers of the contracted hand began slowly to open, while those of the opposite hand began to assume the position they were quitting, until the contraction was completely transferred. The same result followed when localized contraction was induced by exciting a tendon or the muscle itself.

Anæmia of a limb produced by Esmarch's bandage prevents the manifestation of contraction, so long as the anæmia persists; but as the blood returns to the limb the contraction shows itself. In the former stage, therefore, it may be considered to be latent. This latent contraction may also be transferred by the magnet; so that, while in the bloodless limb no contraction results from exciting the nerve, a magnet applied to the opposite arm develops in it the spasm of the ulnar group of muscles.—*London Med. Record*, June 15, 1881.

Glosso-labial Palsy.

Dr. Andrew Clark has recently had under his care a rapidly fatal case of glosso-labial palsy, which is reported in the *Med. Times and Gazette* for July 2, 1881. He says:—

"The chief features of this case are its rapid course (the patient being quite well three months ago), the transient attacks of loss of voice, the progressive emaciation, and the supervention of permanently dangerous and symptomatic phenomena only a fortnight before death—viz., inability to swallow, and loss of voice, and paralysis of the muscles of the pharynx—and the sudden death by syncope. The nerves involved in this disease are generally stated to be the seventh, the ninth, and the eleventh. In this case, the seventh was only very slightly involved, as evidenced by the slight drawing of the right side of the face. The ninth nerve, evidently, was chiefly implicated, as evidenced by paralysis of the azygos uvulæ and the palato-pharyngeus and palato-glossus of the left side, and the paralysis of the posterior portion of the pharynx. Some amount of loss of taste appears to point to impairment of its gustatory fibres also. The vagus had, no doubt, a share in producing the paralysis of the pharynx, and possibly in slowing the circulation by its inhibitory fibres, and causing the final attack of syncope. It is curious to note how partial is the paralysis in this disease very often. I have seen a case which had apparently become quite well under iodide of potassium, and in which the only lesion left was paralysis of the uvula. When we remember, however, how many individual fibres go to make up a nerve—*e. g.*, in the optic nerve probably some 100,000—the selection of these individual muscles becomes more intelligible. Glosso-labial palsy is somewhat rarer as an idiopathic disease than when occurring along with other well-marked nervous diseases. The causation is obscure, and in this case would appear to be from excessive heat and cold. These changes of heat and cold have a remarkable influence in inducing certain diseases of the nervous system—*e. g.*, progressive muscular atrophy, which Charcot has asserted to be very common amongst stokers. No doubt, had a post-mortem been made, a sclerosis in the medulla would have been found,

involving the nerve-roots (or their cells) of the seventh, ninth, tenth, and twelfth. The disease is not always easy to recognize, but in a well-marked case the features are distinctive enough. The above case, however, had been treated for 'liver complaint' before being sent to the hospital."

—

Paralysis from Apoplexy of the Medulla Oblongata.

Herr M. DE BON relates (*Nord. Med. Archiv*, Band xiii.) the case of an unmarried woman, aged 48, who had for two years had a constant dull pain in the neck, which was much increased when she bent the head forwards. In 1878, her sight began to fail. On April 2d, 1879, she had vomiting and giddiness. On May 2d, she had giddiness and nausea when she lay down. Afterwards, she had difficulty in speaking and swallowing; in the afternoon, she lost speech, and respiration became stertorous. The next day, there was complete paralysis of all limbs. The face was immovable; the right eyelid was paretic, and the right pupil dilated; the left eyelid was unaffected; respirations, 60 to 80; pulse, 150; consciousness appeared to be retained. She died on the same day. At the necropsy, the coats of the basilar artery were found to be much thickened, and its lumen reduced. The same condition, but in a less degree, was found in both vertebral arteries, for the space of about one centimetre. There were no dilatations nor depressions on the outer surface of the vessel. The basilar artery was empty; at the part next the vertebral arteries was a thrombus, half a centimetre (0.2 inch) long, which extended a centimetre into the right, and a centimetre and a half into the left vertebral artery. The pons Varolii was pale; the medulla oblongata was very pale and soft; and under the ependyma, corresponding to the eminentia teres, was a small hemorrhagic clot, which, on section, was found to be pale, soft, and homogeneous. Several small clots were found in the cerebellum. The occipital headache, for two years, might have been due to the anæmic condition of the posterior part of the brain and meninges, in consequence of the insufficient flow of blood from the obstructed basilar and vertebral arteries. The symptoms of affection of the medulla oblongata first appeared when thrombosis of the vertebral arteries, and consequent anæmia and softening of the medulla, took place. From this time, the symptoms became distinctly marked: on the second day, all the nervous functions were thrown into a state of inaction; and the patient died, unable to speak, swallow, or move herself, but apparently quite conscious. The thrombosis occurred, possibly, nearly at the same time in both vertebral arteries, since no unilateral paralysis was observed. No microscopic examination of the vessels was made.—*London Med. Record*, June 5, 1881.

—

Temporary Paralysis after Epilepsy.

Dr. HUGHLINGS JACKSON (*Brain*, Jan. 1881), by many and powerful arguments, supports, elaborates, and, we may say, establishes, the theory of Todd and Alexander Robertson, that temporary post-epileptiform paralysis depends on temporary central exhaustion, consequent on the excessive discharge during the paroxysm. Previous observation has shown that local temporary paralyses most usually occur after epileptiform seizures (the spasm commencing in the terminal part of a limb, or in the side of the face), as distinguished from epilepsy proper. Dr. Hughlings Jackson now shows that, in accordance with Todd and Robertson's theory, paralysis also occurs after true epilepsy; it is distributed over all parts of the body, and has hitherto been regarded as weakness, prostration, coma, etc. When the nervous discharge is partial in its distribution; when, for example, one limb only is affected thereby, that particular limb will suffer from the paralysis due to central nervous exhaustion in the paths or centres most intimately con-

nected with it. If the nervous discharge be distributed along various paths to the whole of the body, then the whole body will be affected by the resulting central nervous exhaustion.—*London Med. Record*, June 15, 1881.

—

Softening of the Brain in Puerperal Pyæmia, as the Result of Infection with Micrococci.

In the *Breslauer Aerztl. Zeitschr.*, 1880 (S. 205), two cases are given by LAFFTER with autopsies. In the first, the woman was taken with pains in the abdomen eight days after delivery, these being followed by somnolence, and paralysis of the right side, extremities, and face. Death occurred three weeks after delivery. The following lesions were found at the necropsy: a pyæmic abscess of the lung, enlargement of the spleen, multiple abscesses in the kidneys, recent aortic endocarditis, and softened purulent thrombi in the plexus of veins around the vagina. In the left frontal lobe of the brain was a patch of red softening, almost as large as a hen's egg. On microscopic examination, numerous micrococcus-emboli were discovered in the vessels of the kidneys, and of the brain in the neighbourhood of the softened spot; the latter being in some cases tightly distended with colonies of micrococci, in others containing only scattered chains of micrococci arranged in a serpentine manner. In the second case, the signs of puerperal pyæmia and endocarditis were also found; and, in addition, a patch of red softening, about the size of a hazel-nut, in the right frontal lobe, and in connection with this a purulent meningitis over the convexity of the brain. The histological condition was identical with that of the first case. Clinically, somnolence only, and no local paralysis, was observed.—*London Med. Record*, June 15, 1881.

—

Determination of Albuminoid Degeneration.

Dr. C. ARNSTEIN, of Kasan (*Central. für die Med. Wiss.*, No. 13, 1881) says he has had the opportunity of examining certain growths from the eyelids sent him by Professor Adamuk, to investigate whether they were amyloid or not. He found that some were decidedly amyloid, but others, although the tissue was translucent, gave no amyloid reaction. In some of these latter there was no cell-proliferation; in others, the degenerated parts alternated with patches of cell-proliferation with numerous giant-cells. In one case he recognized the preliminary stage of hyaline degeneration, to which he gave the name of fibrinous degeneration. In the latter, he could distinguish, along the vessels, fibrous finely striated layers, which permeated the adventitia, and gradually became hyaline, in such a manner that the outer layers appeared already grass-like, while the inner were still finely striated. In the next stage, vessels could be seen, the wall of which appeared like thick clear glass rings or hollow tubes; the striation had completely disappeared, and the lumen of the vessel was reduced to a minimum, or quite obliterated. In the tissue itself, he could distinguish with high powers a finely fibrillated granular-looking reticulum, which, at neighbouring spots, was replaced by a bright hyaline stroma. In the narrow meshes of this stroma, nucleated cells and giant-cells were demonstrated by carmine. He has found cochineal-alum a valuable colouring agent for amyloid matter. The amyloid matter is coloured red, while, in the normal tissues, the nuclei are coloured violet, and the protoplasm and ground substance remain colourless.—*Lond. Med. Record*, June 15, 1881.

Formation of Hyaline Tube-Casts.

RIBBERT has already advanced the hypothesis that hyaline tube-casts are formed from altered albumen which has transuded into the glomeruli. This coagulation of albumen in the convoluted tubules he believes to be brought about by reason of the acid reaction of the urine. In order to prove this, he makes certain observations, proceeding upon the hypothesis that, if the acid reaction of the contents of the tubules so acted, then the artificial acidulation of the contents of the glomeruli by the injection of acids into the blood would cause a coagulation of the albumen in the Malpighian tufts. In each of two rabbits he clamped one renal artery, and, after an hour and a half, he injected 20 to 30 grains of a 2½ per cent. solution of acetic acid into the jugular vein. In the one animal, the kidney was extirpated thirty minutes after the operation; in the other, one hour. In both cases, hyaline masses of coagulated albumen were found in the glomeruli.—*London Med. Record*, June 15, 1881.

Quantitative Analysis of Chlorides in Urine.

For some time SALKOWSKI has employed Vothard's method for the estimation of chlorides in the urine by means of rhodan ammonium in the urine, which he carries out in the following manner. Ten cubic centimetres of urine are diluted to about 60 cubic centimetres, then acidulated with 2 cubic centimetres of pure nitric acid, and decomposed with 15 cubic centimetres of the silver solution usually employed for the estimation of chlorides (1 cubic centimetre = 0.01 NaCl). The mixture is then vigorously shaken until the fluid has become clear, diluted with distilled water to 100 cubic centimetres, and filtered through a dry filter-paper; 80 cubic centimetres of the filtrate are taken and to this are added 5 cubic centimetres of a cold saturated solution of rock salt; and then the quantity of silver estimated by means of a solution of rhodan ammonium. The latter solution is to be added to the silver until the red colour no longer disappears on shaking. The calculation is very simple.—*London Med. Record*, June 15, 1881.

Estimation of Urea.

In a paper in Pflüger's *Archiv*, Band xxi. p. 248, E. PFLÜGER gives in great detail his reasons for believing that Liebig's method is liable to error to the extent of 14 per cent., and indicates certain rules whereby such error may be corrected. Expressed shortly, the principal error in Liebig's work, according to Pflüger, is, that he assumes that if one have a solution of a substance A, and to it add the solutions of a second substance B, and of a third C, both of which have a chemical action upon A, the result is identically the same, whether B or C be the first to be added, which is not the case. Into the details of Pflüger's method (which he calls the static method) it is not possible here to enter. It depends in great measure upon accuracy of preparation, and upon the care with which the solutions required in the analysis are prepared. Very full directions are given in the original paper.—*London Med. Record*, June 15, 1881.

Surgery.

Arrow Wounds.

Dr. H. S. KILBOURNE, Captain and Assistant Surgeon, U. S. A., recently made some remarks upon arrow wounds before the Buffalo Medical Club, that form an interesting contribution to the literature of the subject.

As arrows were among the first offensive weapons used by man in ancient and barbaric times, so they are still the favourite weapon of many savage tribes. This antique weapon is, however, being rapidly displaced by rifles among those tribes whose enmities with the whites have taught them its superiority. An American Indian of the plains, who has seen a breech-loader and does not possess one, will part with all he has in the world to procure it. The bow and arrow is therefore disappearing, and with them the surgery of arrow wounds will become only a curious history.

The service bow of the Indian is quite a different thing from the dainty affair of the archery clubs. It is short, thick, and strong. It is made among the southwestern tribes of the bois d'arc or Osage range. The string is of raw hide, or buffalo sinew. The arrow is made of pecan or any suitable wood, not too heavy and having a straight, tough fibre. The arrow head, formerly of flint, is now usually made of soft iron, cut by a file into triangular shape. It is let into the split end of the shaft by a short shank and fastened by wrapping with strips of sinew, put on before it is dry.

In hunting and fighting, the warrior is mounted on a swift and active pony, and in using the bow he comes to close quarters. In action he rides at full speed, slipping over to the side of the horse and discharging the arrows from under the neck of the animal. The horse thus acts as a living shield for his body.

The rapidity, force, and precision of the shots are, in some instances, marvellous. As a rule, however, the accuracy is about that of a fair marksman with the pistol, as at a running mark.

There is in the Army Medical Museum, at Washington, a preparation of a portion of the left scapula of a buffalo, with an arrow head impacted in it. The barbed iron head of the arrow has entered the venter and the point protrudes from the dorsum, so that the missile must have passed through the thorax.

The specimen is from a buffalo killed at Fort Sedgwick, in 1860, by a Cheyenne Indian. There are also other specimens of bones, penetrated, perforated, and fissured in various ways, some of them resembling the appearance of glass, through which a pistol ball has been fired a few yards off.[1] The rapidity of the discharge of arrows rivals the fire of the first breech-loader I know of. The precision is sufficient to make it exceedingly uncomfortable for any one in the vicinity.

As the arrow head is secured to the shaft by strips of dried sinew, the wounds inflicted by it have this peculiarity: that in penetrating wounds, the fastening is softened by the fluids of the body, and, when not at once extracted, the head becomes loosened and is detached when extraction is attempted. In such cases it remains as a foreign body in the wound. If bone has been penetrated, the arrow head is impacted in it and held fast by the compact tissue, when extraction may become a difficult and hazardous operation.

The late Gen. Kearing suffered from a penetrating arrow wound of the superior maxillary bone, received in an affray with hostile Indians, about 1855 or 1856, until his death. The arrow head was so pinched and twisted by the hard bone, and attempts at removal were attended by such copious hemorrhage, that the iron was allowed to remain until a secondary operation was practicable. The missile was finally removed in St. Louis, after a severe operation, but the patient never entirely recovered from its effects. At short range, the arrow will perforate a flat bone, as a rib, making a clean cut, or a slight cracking or splitting. There is seldom any comminution or extensive fissuring like that produced by the impact of a conoidal rifle ball with bone.

[1] Dr. Otis, U. S. A., in Report in Surg. Cases in the Army.

In all the specimens showing penetration of the cranium, there is, according to Dr. Otis, little or no fissuring internally or externally. The inner and outer tables are both cleanly divided. This feature distinguishes arrow wounds of the calvaria from all others caused by weapons used in civilized warfare. Indeed, among all weapons I have seen, I know of none capable of making wounds so peculiar.

There are in the army museum specimens illustrating these features and also the impaction of arrow heads.

For the relief of these injuries, it is most natural to seize the arrow and draw it out of the wound. But that will never do. The head will part with the shaft and remain in the bottom of the wound. If not loosened by softening of the sinew, the head, if barbed, will catch in the soft parts and may, in certain regions, work irreparable injury.

Dr. Bill, of the army, has employed a device for these operations which is often of great service. He passes the loop of a wire snare down along the shaft and over the arrow head, and, when in place, secures it by traction on the outer end of the loop. The missile may then be carefully withdrawn entire. When the iron is impacted in the bone, he employs a loop of annealed wire, passed down along the shaft, which serves as a guide. The arrow head is snared by the loop; the ends of the wire are then passed through a long suture-twisters or double canula, which is passed down to the loop; the ends of the wire are then twisted or secured to the handle, and arrow and instrument are withdrawn together. In a case where a Navajo arrow had penetrated the lung to a depth of five inches, Dr. Bill removed it by means of the simple snare first described.

A prominent army officer, now retired from active service, when serving in Texas as a subaltern, was, while in an encounter with hostile Comanches, transfixed by an arrow. The weapon pierced the upper part of the right chest and passed nearly horizontally through the lung, the point protruding at the back, between the scapula and spine, on the same side. He informed me that, at his own request, a silk handkerchief was fastened to the shaft, which was then pushed on through the body, dragging the silk after it through the whole extent of this formidable wound. He recovered from the effects of the wound and from this novel surgical procedure, and served actively for many years after.

In the report of surgical cases in the army since the war, I find the following somewhat similar case, reported by Dr. Goddard, U. S. A. His employé at Fort Rice, D. T., was wounded in February, 1868, by an arrow, which entered his back three inches to the right of the fifth lumbar vertebra and emerged at a point two inches to the right of the ensiform cartilage. During the following evening the patient lost externally about eight ounces of blood, and a small (estimated) quantity internally. He was confined to his bed some two weeks, suffering from irritative fever and circumscribed peritonitis. In four weeks he was walking about, and on July 1st was actively employed. There are no further particulars or comments on this case.

The route of the missile is a mystery. It would seem impossible that it could have been direct between the two wounds, as the intestines, stomach, and liver lie in the way. Both the great cavities would also have been opened. Penetrating arrow wounds of the abdomen are usually mortal.

Of 9 cases reported in detail, 7 were fatal; and of the 2 which recovered, it is doubtful whether the peritoneal sac was penetrated. One of the fatal cases was mine, and, as it may be taken as a type of its class, I will give it here: A cavalry soldier was wounded while approaching an Indian camp at night, near the Canadian River, Texas, by an arrow which entered the abdomen in the left hypochondriac region, making a wound about three-fourths of an inch in length,

through which about eighteen inches of the small intestine protruded. The gut was cut in four places. The wounds in the intestines were closed by sutures and the protruding portion returned through the wound, which was enlarged for the purpose. When found, the man had lain out all night, and was in a state of collapse. He was carried along with the column, in an ambulance, but died on the second day, never having rallied from the shock of the injury.

The great fatality of arrow wounds of the abdomen is so well known to the Indians that in action they usually aim at the umbilicus.[1]

Another case, which I personally observed, is so unique that I will briefly give its outlines. It is an example of a penetrating arrow wound of the lower part of the trunk. The operation for its relief was done at Fort Sill, I. T., by Dr. Forwood, of the army, who reports the case. I assisted him and saw the patient up to the date of his removal.

"Latimore, a chief of the Kiowas, aged 42 years, applied at Fort Sill for treatment, with symptoms of stone in the bladder. In 1862 he had led a band of his tribe against the Pawnees, and was wounded in a fight. Being mounted, and leaning over his horse, a Pawnee, on foot and within a few paces, drove an arrow deep into his right buttock. The shaft was withdrawn by his companions, but the point remained in his body. He passed bloody urine soon after the injury, but the wound soon healed, and in a few weeks he was able to ride without inconvenience. For more than six years he continued at the head of his band and travelled on horseback many hundreds of miles every summer. A long time after the injury he began to feel pain in urination, which increased, until he was forced to reveal the sacred secret, as it is regarded by the Indians, and to seek medical aid. The urine was loaded with blood, mucus, and pus; the introduction of a sound indicated a large, hard calculus in the bladder. Judging from the cicatrix and all the circumstances, it was apparent that the arrow had passed through the glutic muscles and the obturative (sciatic?) foramen into the bladder. On Aug. 23d I removed the stone by the lateral operation. The calculus was phosphatic, and weighed eight hundred and fifteen grains. On section of the stone, the arrow point was found imbedded near its centre. It was of iron, and had originally been about two and one-half inches long, by seven-eighths of an inch broad in its widest part. The urine began to pass by the natural channel on the third day, and on the seventh day it had nearly ceased to flow from the wound. But the restless spirit of the patient's band could no longer be restrained; open hostilities with the whites were expected to begin every moment, and they insisted on his removal. He needed purgatives on the eighth day, which they refused to allow him to take; on the following day they started with him to their camp, sixty miles away. Fourteen days after he is reported to have died. But his relatives have since assured me that the wound had healed, and that no trouble arose from it."

Notwithstanding a narrow pelvic outlet and the large size of the stone, there was every reason to expect a favourable result in this interesting case. These Indians possess remarkable powers of endurance and recuperation from wounds, due, doubtless, to their active life in the open air of the Western plains. But it is possible that the case may have been complicated by an induced disease of the kidneys.—*Buffalo Med. and Surg. Journal*, July, 1881.

Ununited Fracture of the Olecranon treated by Suture of the Bones.

At a late meeting of the Clinical Society of London (*Lancet*, June 4, 1881), Mr. MacCormac read notes of a case of Ununited Fracture of the Olecranon

[1] Dr. Bill, U. S. A.

Process, in which Bony Union was obtained by Sutures of the Bones. The patient (who was exhibited) was a piano-tuner, twenty-six years of age, who four months before coming to St. Thomas's Hospital had fallen upon the right elbow, and sustained a fracture of the olecranon. When admitted the limb was wasted, especially the triceps; there was no power of active extension; the line of fracture ran across the base of the olecranon, the detached portion being separated by two inches, and fixed to the back of the humerus, the condyles of which could be felt in the gap, no uniting medium being perceptible. On Jan. 6th Mr. MacCormac made a vertical incision three inches long, exposing the fractured bone and the articulation. There was no trace of uniting material, the fractured surfaces were covered with smooth fibrous tissue, and adhesions existed between the detached process and the condyles, and also between the end of the humerus and ulna. These adhesions were dissected out, and the periosteum being reflected, a thin layer of bone was cut off with a chisel, and by means of two wire sutures through holes drilled in the bone the surfaces were brought into close apposition. The wires were twisted and cut off so as to project at the centre of the wound, which was afterwards closed with catgut sutures. The operation was performed antiseptically, the joint being washed out with carbolic solution (1 in 30) before closing the wound. The first dressing was made on the fifth day, when the wound was found to be united, except where the bone-sutures emerged, and these were removed in twenty-one days. In forty days the patient left the hospital with very good active movement at the elbow-joint, and apparently firm bony union at the seat of fracture. From first to last he had no pain or inconvenience. The wound healed without a drop of pus; the temperature occasionally rose to 99°.8; it was otherwise normal throughout. He has now perfect power of active extension. The arm cannot be made absolutely straight, but he is able to follow his trade as well as before.

Mr. Lister believed he was the first to perform an operation of a similar nature many years ago in Edinburgh. The patient was an engineer in the prime of life, who had sustained a fracture of the olecranon. Mr. Lister exposed the ends of the fragments by a longitudinal incision; and after paring away the surfaces, drilled the fragments and tied them together by strong silver wire, using a single suture, which was more convenient than a double suture, for it remained in the line of incision. The result was, as in Mr. MacCormac's case, there was no inflammatory or constitutional disturbance. The man left with bony union and resumed his occupation. Since then, at King's College Hospital, he had similarly treated another case with like result. In neither was the upper fragment fixed to the humerus, as in Mr. MacCormac's case; nor was the separation between the fragments so wide. It was refreshing to hear antiseptic dressings spoken of as a matter of course; but he suppo-ed few members of the Society would perform such an operation as the free opening of a joint without such antiseptic precautions as we possess, which afforded such security against complications.

Antiseptic Osteotomy of the Tibia; Rapidly fatal Carbolic Intoxication.

Mr. Pearce Gould at a recent meeting of the Clinical Society of London (*Lancet*, May 21, 1881) read a paper on a Case of Antiseptic Osteotomy of the Tibia, in which rapidly fatal carbolic intoxication occurred. A lad, eight years of age, of robust appearance, was admitted, under his care, into Westminster Hospital in Oct. 1880, with rickety deformity of the legs, especially of the left tibia. Other treatment had been perseveringly tried at the National Orthopædic Hospital for some time without avail, and he was sent in for the purpose of having osteotomy performed. His general health was very good. On Oct.

30th chloroform was administered, and the left tibia divided with McEwen's chisel, with a careful observance of the details of Listerism. He quickly recovered from the effects of the chloroform, and slept well through the night; next morning (Oct. 31st) he took his breakfast and appeared quite well; temperature 98.4°. At 11 A. M. (twenty-one hours after the operation) he vomited; and vomited a watery fluid repeatedly up till 9.30 P. M. He also passed two orange-coloured loose stools. At 7 P. M. he was rigid, and at 8 P. M. very restless; at 9 P. M. he was almost unconscious, he was breathing hurriedly, pulse almost imperceptible at the wrist. At 10 P. M. Mr. Gould saw him; he was then conscious; lying quiet and quite flat, respiration 44 per minute, air entered lungs freely, pulse very small and rapid, pupils small. He died, asphyxiated, at 2.30 A. M., Nov. 1st, thirty-six hours and three-quarters after the operation. There was complete suppression of urine after 11 A. M. Temperature rose to 100.2°, and fell to 99.6° at 2 A. M. on Nov. 1st. The treatment consisted in the application of warmth and stimulants to the surface, and brandy internally. At the autopsy all the viscera were apparently healthy, with the exception of congestion of the tracheal and bronchial mucous membrane, and excess of mucus in these tubes, and slight congestion of the lungs. The left side of the heart was empty, the right side contained partly-clotted blood; blood in smaller veins all fluid, in the larger partly in soft clots, all of it black. No petechiæ; no staining of endocardium or intima; no sign of fat embolism. Bladder empty. A small blood-clot in the wound; no crushing of the medulla; no thrombosis of tibial vessels. Microscopic preparations of the organs were made for Mr. Gould by Dr. Heneage Gibbes, some of which were shown at the meeting. From these it was seen that there was thrombosis of the capillaries and smaller vessels of the lungs with minute spots of round-cell inflammatory exudation. Similar minute inflammatory foci were also found in the kidneys, while sections of the stomach showed intense inflammation of its mucous surface, only traces of its glands being visible, and at places the process was evidently advancing to suppuration. No sign of fat embolism.

In discussing the cause of death Mr. Gould pointed out that shock, chloroform, the acute specifics, erysipelas, septicæmia, pyæmia, and fat embolism might be excluded, as was also the ingestion of any irritant matter, but yet both the symptoms and pathological changes showed evidence of the circulation of some irritant in the blood. The symptoms were individually considered, and it was shown that the vomiting, diarrhœa with orange stools, collapse, rigidity, restlessness, loss of consciousness, very hurried respiration, slight rise of temperature, and death from asphyxia, were the symptoms observed in cases of undoubted carbolic intoxication. The urine passed before the onset of vomiting appeared to be normal, and was not preserved; the suppression of urine later on was a new fact in such cases. The softly coagulated and black blood had been noted before, but there was no record of any microscopical examination of the apparently healthy organs usually found. The quantity of acid absorbed was no doubt small, and the great susceptibility of the patient to its toxic effect must at present be spoken of as an idiosyncrasy; but from the absence of other cause, and of any facts to negative the supposition, as well as the agreement of the symptoms and post-mortem pathological changes in the main with those observed in cases of carbolic intoxication, he was forced to the conclusion that such poisoning was the cause of death.

Professor LISTER remarked upon the interest attaching to the suppression of urine, which he had not met with before. He had no doubt that Mr. Gould's view must be accepted, that this patient was one of those who had an unfortunate susceptibility to the toxic effects of carbolic acid. He had met with cases of such susceptibility, and one he called to mind was a lady whose breast he removed and

dressed in his usual manner; intense symptoms of carbolic poisoning came on, and boracic lint was substituted for the gauze dressing, but the spray was used when the lint was changed, and this was sufficient to keep up the symptoms, which only abated when its use was discontinued. As an instance of the special local susceptibility of some patients, he mentioned a case of chronic synovitis of the knee-joint, which he opened and dressed antiseptically, and next day he found all the skin under the gauze intensely red and irritated. It had been stated that there was no antiseptic that could with safety replace carbolic acid, though several had been tried; but he was in a position to say that the oil of Eucalyptus globulus, if used properly, is a powerful and perfectly reliable antiseptic, and is also quite unirritating and without toxic effects. If the oil be made into an emulsion with spirit and water, and then used, it very quickly evaporates; but he had found that gum damar holds it exceedingly well, and the mixture remains soft and strongly odorous of the oil even at the end of several weeks. He had used a gauze prepared with a mixture of one part of the oil, three of damar, and three of paraffine, and he was able to assert that it might be thoroughly trusted as an antiseptic where carbolic acid was unadvisable.

—

Trepanation of the Ilium in a Case of Pelvic Abscess.

The patient, a tailor, aged 24, had disease of the lumbar vertebræ, a cold abscess starting from which had burrowed into the left hip-joint, and invaded the whole pelvis (*Deutsch. Zeitschr. für Chir.*, Band xii.). An opening above Poupart's ligament not affording sufficient drainage, Dr. G. FISCHER trephined the ilium at its upper and posterior part, and afterwards established a transverse drain across the pelvis. The patient died twenty-five days later from exhaustion, due to prolonged suppuration and progressive pulmonary tuberculosis. The necropsy showed that stagnation of pus had not taken place in any part of the pelvis; and hence Fisher considers that he has established the justifiability of trephining the ilium to obtain a counter-opening in cases of pelvic abscess.—*British Med. Journal*, May 7, 1881.

—

Resection of Large Trunk-Veins.

PILZER opposes strongly (*Deutsch. Zeitschr. für Chir.*, Band xiv. Heft 21) the prejudice against ligature of large veins, citing recently recorded cases to prove that the fear of pyæmia is groundless. He gives in detail six cases from the Heidelberg surgical clinic. In all six, malignant disease was present; and the internal jugular vein was resected in four cases, both internal jugulars in another, and the femoral vein in the sixth. All the cases recovered. Resection of the vein is much to be preferred to the dissection of it out of the tumour, with the great risk of recurrence of the tumour from fragments left on the vein.—*British Med. Journal*, May 7, 1881.

—

Treatment of Vascular Tumours by Electrolysis.

Dr. NIEDER, in the *Archives of Ophthalmology*, March, 1881, quotes some illustrative cases. In two of them, a tumour consisting of large veins exerted such a pressure on the upper eyelid that the eye could not be opened. In all instances, a complete cure was effected without any untoward symptoms. He employed from four to six cells (model of Spamer), with a key to connect or interrupt immediately. The needles may be of steel, although a platinum needle is preferable for the positive electrode, to prevent oxidation and permanent staining of the punctured spot. Both needles are introduced into the tumour, and left in place for the space of one to three minutes, whereupon the site of the

negative pole is charged according to the size of the growth. The bubbles of hydrogen arising at the negative needle may disturb the tissues, but are harmless; moreover, they are readily dispelled by pressure. At each sitting a few punctures, not over five or six, are made, while the number of sittings varies according to the size and the location of the angioma. The immediate effect is hardening and shrinkage from coagulation of the blood. Some suppuration occurred in all instances but one, which resulted in loss of substance or formation of unexpected cicatrization. Antiseptic after-treatment was maintained.—*London Med. Record*, June 15, 1881.

—

Neuritis in Stumps.

In an original contribution to the first number of the *Revue de Chirurgie*, Dr. G. Nepveu, of Paris, after a short review of previously recorded cases of neuritis in stumps, relates a case, observed by himself, of ascending neuritis in the leg after amputation of the foot for gangrene from endarteritis. About four months and a half after the operation, the extremity of the stump ulcerated, and the patient, a man aged 44, suffered from severe shooting pains, which reached to the middle of the thigh, from painful contractions of the flexor muscles of the stump, and also from pain and convulsive movements of a similar character in the sound leg. Removal of the painful stump by amputation just below the seat of election was ultimately followed by complete relief, although the stump left at this second operation ulcerated and was very tender for about four months. On examination of the amputated stump, the posterior tibial nerve was found to be thickened and adherent at its lower extremity to the cicatrix; and the lower portions of the anterior tibial and internal saphenous nerves resembled fibrous cords. The microscopic appearances of these nerves even at their proximal extremities indicated a chronic interstitial and parenchymatous neuritis, that is to say, an inflammation affecting both the connective tissue and the nerve elements. This condition, M. Nepveu states, accounts for the convulsive movement of the stump, its ulceration, and the severe pain felt by the patient. Moreover, it enables us to understand why the sound limb had also been involved in the spasm, and why, after the second amputation, relief of the pain resulted very slowly and not immediately. Ascending neuritis in a stump affects, it is stated, two very different forms—the simple form and the complicated. Simple ascending neuritis may be accompanied by persistent neuralgia, or by trophic disturbances in the stump. The complicated ascending neuritis presents itself in one or other of two different aspects. Sometimes it attacks the other and sound limb on the side of the stump—ascending neuritis and unilateral myelitis. At other times the myelitis is called transverse, and then the surgeon has to deal with paralysis of the bladder, and paralysis, neuralgia, or contracture of the corresponding limb on the opposite side. The myelitis may be followed by rapid death. M. Nepveu regards his case as one of recovery. Attention is directed to M. Verneuil's practice of resecting nerve-trunks in the flaps during amputation. This resection, it is thought, would probably result in diminishing among those who have submitted to amputation the number of instances of neuritis, whether ascending or localized. In confirmed cases of neuritis of stumps, surgical intervention (re-amputation, neurectomy) has been attended with varying success.—*London Med. Record*, May 15, 1881.

—

The Treatment of Neuromata by Enucleation.

Mr. E. Downes, in the *Lancet*, April, 1881, suggests that, in many cases of nerve-tumour, the morbid mass may be shelled out by a longitudinal incision,

instead of excising the growth with a portion of the nerve itself, or amputating the limb, as in some cases has been done. Three cases are related in which this mode of treatment was successful, the nerve-fibres completely surrounding the tumours, which lay in the centre almost entirely unconnected with the nerve itself. In one case, in which a neuroma of the median nerve was treated by excising the mass with the included portion of the nerve, a large number of smaller neuromata spontaneously disappeared after the larger one was thus removed. [Prof. Kosinski narrated a somewhat similar case (*Medical Times and Gazette*, November, 1874, p. 558); here, after a neuroma of the small sciatic had been excised, a large number of similar tumours spontaneously disappeared.] —*London Med. Record*, June 15, 1881.

—

Removal of the Kidney for Nephrolithiasis.

At the Charing-Cross Hospital is a lad aged fifteen, from whom Mr. BARWELL removed a kidney on May 5th, and who is now convalescent. The boy had been under observation for about a year with pyelitis and retro-peritoneal abscess. An incision was made about ten months ago, with the effect of mitigating the symptoms. The wound had healed, leaving only a sinus. In April, by sounding through this passage, Mr. Barwell detected a stone. Yet although the lad was becoming very anæmic, with irregular hectic temperature, no consent for operation could be obtained until the above date, when lumbar nephrectomy was performed. Two peculiarities rendered the removal unusually difficult—viz., the dense thick cicatricial tissue and the proximity of the rib to the ileum. Mr. Barwell cut through the tissues, and came upon the kidney with the stone impacted. An endeavour to extract this latter caused copious bleeding, hence the operator rapidly enucleated the gland, and passed a ligature round the pedicle *en masse*. Since want of room forbade removing the kidney entire, it was divided and extracted in two parts. The operation was thus completed very quickly, and with scarcely any loss of blood. Since then the boy has been going on uninterruptedly well, his temperature becoming normal and regular, the wound being now nearly healed. This is, we believe, the second successful case of removal of the kidney for stone.—*Lancet*, June 4, 1881.

—

Rhinitis and Plugging of the Nose.

GOTTSTEIN, in the *Berl. Klin. Woch.* 1881, No. 4, defends his treatment of ozæna by means of a cotton-wool plug against the adverse criticisms of different writers. He holds to the following opinions: 1. Plugging is the best known means of preventing the formation of crusts in rhinitis having a tendency thereto. 2. Fetor arising from the so-called atrophic rhinitis is immediately removed by plugging, not so that arising from necrosis. 3. Plugging is effectual in atrophic rhinitis, only when the plug or tampon is in actual contact with the diseased mucous membrane. The tampon ought to be 1½ to 2 inches long, and at the utmost a fifth of an inch thick, so that it may reach almost to the posterior nares. Both nasal cavities should never be plugged at the same time. The plug should remain, as a rule, two to three hours *in situ;* but sometimes it may remain as much as twelve hours, and some patients wear it during the night. Medical treatment is, he says, useless, but a vigorous nasal douche in the intervals is beneficial. In the hypertrophic form, the plug readily causes bleeding and pain. In defect of the septum with formation of crusts, plugging gives most excellent results.—*London Med. Record*, June 15, 1881.

Discovery of the Micrococcus of Syphilis.

Dr. AUFRECHT of Magdeburg (*Central für die Med. Wiss.*, No. 13, 1881) announces that he has discovered in syphilitic condylomata a micrococcus, which may be recognized by the following characters. The single cocci are of rather coarse grain; they are generally of the form of diplococci, or two joined together, and the number of these is greater than of the single cocci. They are very seldom in threes. They are stained deeply by fuchsin. He has found them in six cases; but in one, where the condyloma was ulcerated, and, in another, where it had been painted with corrosive sublimate, they were very scarce. He, therefore, excludes ulcerated condylomata, or those which have been treated specifically. To obtain the micrococci, the condyloma should be incised with a lancet, and the blood sponged away; then a drop of the serous fluid that follows should be collected on a cover-glass, which is put under a bell-jar for twenty-four hours to dry. At the end of that time, a drop of a half per mille solution of fuchsin is placed on an object-glass, and the cover-glass is laid on it. The excess of fuchsin is wiped away after two or three minutes, and the object examined with Hartnack's 9A immersion-lens. To preserve the object, he puts a little dammar varnish around the edge of the cover-glass.—*London Med. Record*, June 15, 1881.

—

Effects of Excision of the Syphilitic Chancre.

M. MAURIAC reports (*Gazette des Hôpitaux*, 1881, Nos. 7, 10, 14) seven carefully recorded cases in which he excised the initial lesion of syphilis. In six, excision was performed at periods varying from four to sixteen or eighteen days after the appearance of the sore. In the seventh case, the initial lesion was excised about fifty hours after it had been first noticed, and before there was the least trace of glandular enlargement; but in this, as well as in all the others, the operation was unsuccessful in preventing further development of the disease.—*London Med. Record*, June 15, 1881.

—

Pathological Anatomy and Pathogeny of Gonorrhœal and Urethral Epididymitis.

In a paper lately read before the Société de Chirurgie (*Bull. et Mém. de la Soc. de Chir.*, 1881, No. 2, pp. 119, 155), M. TERRILLON details his views on this subject, derived from a study of cases observed by himself and others, and of experiments made by himself on dogs, by injecting irrigating fluids into the vas deferens. 1. *Pathological Anatomy.*—There are four different degrees of inflammation of the vas deferens. (*a*) In the first, the mucous membrane is alone attacked, and presents all the characters of catarrhal inflammation. The epithelium loses its cilia, and the submucous tissue becomes swelled and infiltrated with lymph-corpuscles. The vas deferens is not altered perceptibly when examined externally, and, therefore, this degree of inflammation cannot be recognized clinically. (*b*) Much more frequently the inflammation extends to the fibro-muscular walls of the vas deferens, which becomes swollen to two or three times its normal size. The bloodvessels and lymphatics are also much dilated. (*c*) The inflammation may spread to the cellular tissue of the spermatic cord, when the whole becomes welded into a mass, of which the various constituents cannot be recognized. (*d*) The inflammatory process may reach the connective tissue and scrotum. During the course of the inflammation, the vas deferens contains a yellow fluid, with a large number of pus corpuscles, and a smaller number of large granular cells. Spermatozoa are at first present, but disappear if the inflammation be prolonged. The tail of the epididymis is the part chiefly

attacked. On section, the colour is grayish-green; the tubes are mostly dilated, and little foci resembling abscesses are seen. The intertubular connective tissue is increased, hardened, and infiltrated with lymphatic cells and pigment-granules. In the body of the epididymis the changes are less marked, and still less so in the globus major. No appreciable alteration, except congestion, takes place in the testis proper. The tunica vaginalis is always affected in acute epididymitis, by the formation of false membranes and the effusion of serum. 2. *Results and Termination.*—The phenomena disappear in the inverse order of their appearance. In about a month, the globus minor and vas deferens only remain affected. The latter remains thickened for several months. The author does not agree with Gosselin, who is of opinion that the excretory duct becomes blocked. Terrillon thinks that obliteration is not necessary to explain the absence of spermatozoa; but that their absence is due in many cases to a modification of secretion—in short, to a persistent catarrh of the mucous membrane of the vas deferens and globus minor. In his experiments on dogs, the author found the spermatozoa absent, or nearly absent, from an early stage of the inflammation, and before obliteration had had time to take place. 3. *Development of Epididymitis.*—The sole theory which is admissible, and proved by pathological anatomy and experiment, is the propagation of the inflammation along the ejaculatory ducts and vas deferens. All clinical facts accord with this, viz., first, the appearance of epididymitis at the time when the inflammation has reached the prostatic region; second, the occurrence, in most cases, of swelling and pain in the course of the vas deferens before the epididymitis itself becomes affected. The theory of metastasis is untenable.—*London Med. Record*, June 15, 1881.

—

Colour-Blindness.

It has long been felt desirable that legislative measures should be taken to protect the public from the dangers to which they are exposed by the employment of the colour-blind in positions in which safety is dependent on colour-perception. Statistics have been industriously collected by our Continental and Transatlantic *confrères* as to the prevalence of colour-blindness, but it is obviously necessary that our legislative bodies should be supplied by trustworthy, accurate data as to the frequency of colour-blindness amongst our own population before they can be urged to frame laws for the public safety. The Ophthalmological Society has, therefore, done good service in instituting an inquiry into the prevalence of colour-blindness in the United Kingdom. The Report of the Committee appointed to inquire into defects of sight in relation to the public safety was read at a meeting of the Society held on the 7th inst. by Dr. Brailey, from whose lucid and able statement we gather the following particulars:—

The inquiry extended over five months, and the examinations were conducted by gentlemen of experience. The material was collected from various sources, consisting of public institutions, schools (public and private), the Metropolitan Police, and the Coldstream Guards. The number examined (18,088) was sufficiently large to justify deductions from the observations. The examinations were made by the matching of coloured wools, following, in the main, the method of Holmgren. Certain cases were also tested by coloured lights, as exhibited in the instrument of Donders, and also by means of a lamp designed by Mr. Nettleship, in which is employed the actual coloured glass used in railway signals.

Colour-blindness was taken as an inability to distinguish from each other two or more colours; but persons who had simply confused blue with violet, or green with blue, had not been ranked with the colour-blind. It was clearly distinguishable from a defective knowledge of the names of colours, and from defects of

vision in other respects. Those were recorded as *slightly colour-blind* who had failed to distinguish from each other the pale shades only of different colours—mistaking, for example, gray or buff for green, and even mauve, yellow, or pink. Those who, besides failing as above, could not recognize the difference between red and green, matching either scarlet with green, or rose colour with green, gray, or violet, were considered *pronounced colour-blind*. Three cases only were discovered where there was a total failure of the recognition of *all* colours, these being only distinguished as shades. In the vast majority deficient recognition of two colours only was conspicuous. These associated colours were either red and green, or blue and yellow. Failure to recognize blue and yellow was rare, and from its little practical importance these cases were included as *slight* cases of colour-blindness. In every one of the *pronounced* cases of colour-blindness (617 in number) there was blindness to red and green.

All persons with pronounced blindness to red and green were found utterly incapable of naming with certainty a red or green light when exhibited singly. All failed, also, when the distance and intensity of illumination of the coloured light were unknown. The pronounced colour-blind were divided, as far as practicable, into two groups, in accordance with the definitions of Continental authorities. Those matching rose-coloured wools with dark-blues or violets, and scarlet with dark-greens or browns, were called *red-blind;* while those matching the rose with grays or greens, and scarlet with light-browns or greens, were called *green-blind*. Notwithstanding that many colour-blind stood, as regards the wools, in a position intermediate between the two groups, this division still appeared to the examiners to have a practical value, as the red-blind failed to appreciate at all, even as a light, except at a much shorter distance than normal, a light viewed through glass of the purest red obtainable; whereas the green-blind appreciate it at the full, or nearly the full, normal distance. Red-blindness appeared to be, in the United Kingdom, a little more common than green-blindness.

Coming now to the numerical results, we find that of the 18,088 persons examined, 16,431 were males and 1657 were females. Deducting from the males certain groups of cases specially selected in the expectation of finding peculiarities, there remained 14,846 with an average of colour-defects of 4.76; whilst among females, making similar deductions, there remained 489, with a percentage of only .4. Moreover, in addition to the striking difference in the prevalence of colour-defects in the two sexes, it should be mentioned that the forms encountered in females were nearly always slight.

In certain classes of persons exceptional prevalence of colour-blindness was found. Thus, among male Jews it was 4.9 per cent.; among male Friends, 5.9 per cent.; among the male deaf and dumb it reached the extraordinarily high rate of 13.7. Among females of each of these groups the percentage was less high. It appeared also, that the prevalence of colour-defects was lower among the more educated and socially higher classes. For example, at Eton the percentage was 2.46; among medical students and sons of medical men it was 2.5; in middle-class schools it was 3.5; and among the police, and schools of about the same class, 3.7. On the other hand, those with colour-defects were not intellectually inferior to those of the same class without these defects. Lunatics do not present the peculiarity more frequently than the sane. The prevalence was found to be about the same in adults and children, and in urban and rural districts. There appeared to be a higher percentage of colour-blindness in Ireland than in England, but this might be accounted for by the differences in the social classes examined.

With regard to the causation of colour-blindness, Dr. Brailey is inclined to

regard it as due in most cases to a congenital physical defect, either in the eye or brain, occurring in the first instance as an accidental variation, and, when once existing, liable to be transmitted by descent. It was to the frequency of intermarriage that the high percentage among the Jews and Friends was to be ascribed. The heredity of the defect was strikingly illustrated by some cases alluded to by Messrs. Frost and McHardy. The former referred to a colour-blind who had seven sons, six of whom were know to be colour-blind. None of the daughters had the defect, but one had a colour-blind son. Dr. Brailey is also of opinion that colour-blindness, especially the slighter forms, may arise from defective colour education in infancy, and hence it is that females, from the greater attraction colours have for them at an early age, and the greater attention paid as a sex to colour-distinctions, are less frequently the subjects of the defect.—*Med. Times and Gaz.*, April 30, 1881.

Midwifery and Gynæcology.

The Earliest Recorded Case of Abdominal Section for Extra-Uterine Gestation.

At the March meeting of the Obstetrical Society of Edinburgh Dr. C. E. Underhill, in presenting a historical note of a remarkable case of abdominal section in the sixteenth century, said that "the triumphs achieved by abdominal surgery of late years lend a special interest to cases in which operations involving the opening of the abdomen were performed by the older surgeons. The case I am going to relate appears to be one of the first in which a surgeon ventured to make an incision into the abdomen for the purpose of removing the remains of an extra-uterine gestation; and it is the more striking as the operation was performed during the existence of a second and natural pregnancy, and the patient recovered without any interruption of the pregnancy, which terminated naturally in due course. I came across it in the voluminous collection of curious cases collected by John Schenck of Grafenberg, which was published in Latin in Frankfort in 1609, under the title, *Observationum Medicarum, Rararum, Novarum, Admirabilium, et Montrosarum Volumen.* The work is divided into seven books, and contains upwards of a thousand folio pages. The cases are collected from the writings of a large number of authors, of whose works a long list is given at the beginning of the volume. The case in question is quoted from the history of remarkable cases of Marcellus Donatus, and is to be found in Book IV. page 660, of Schenck's work. It was as follows: In the month of March of the year 1540, at Castrum Pomponii, commonly called Pomponischi, in the province of the Lords of Gonzaga, not far from the river Po, there lived a woman whose name was Lodovica; but, in consequence of her great size, she was commonly called La Cavalla. Now this woman had at one time been pregnant; the fœtus had died in utero, and the soft parts had become putrid and been discharged through the vulva, while the bony parts had been retained within her. When she had recovered her health, she again became pregnant. Her health soon became seriously impaired, and she passed into a condition of the greatest danger. At this time there chanced to come to these parts a certain surgeon, whose name was Christopher Bain, one of those who journey about, passing from town to town. As soon as he heard of this woman's condition, which was fully explained to him by some of the neighbours, he offered to try and restore her to health, on condition that they should put her unreservedly into his hands, including her body if she died (*ac mortuam*), and should agree to pay him ten golden pieces if she recovered. Her relatives, who were poor persons, accepted his offer, some

of the wealthier people in the neighbourhood helping them and promising to pay the money. The man, who was ignorant of letters, but a bold fellow, had the woman tied up, and set about the operation. Having slowly dissected through the longitudinal muscles of the abdomen and the peritoneum, he at last opened the uterus itself, and extracted the skeleton of a male child. He washed out the uterus with warm wine mixed with certain aromatics, and united the lips of the wound by a suture, having burned with the actual cautery the part that was sewn in (*candentique ferro partem inconsutam inurit*). Wonderful to relate, the woman recovered, and in due time bore the other child, not only alive, but absolutely uninjured in any way. She subsequently conceived, not only once, but four times, carried her children to the full time, and was safely delivered. The case I have given is a remarkable one, but I am able to bring witnesses to its reality, namely, Dominus John Baptist Zorzonus, and Alexander Begher, Dominus Frederick de Felini, and Dominus Leonellus Zorzonus, and Antonius Maiochus or Mazzuchinus, and several others, who were present at the whole operation.—*Marcell. Donat. Hist. Med. Mirab.*, lib. 4, c. 22," from *Edin. Med. Journal*, July, 1881.

—

Another Successful Case of the Müller-Porro Operation.

Dr. A. Breisky, of Prague, reports in the *Centralblatt f. Gynäk.* (p. 238) a successful case of Porro's operation. The operation was performed on a 28-year old woman, who had been in labour over two days. The pelvis was "asymetrical, generally contracted, flat, and rachitic," of the third degree of deformity, and with the conjugata vera measuring 2.7–2.9 inches. The child presented by the vertex in the first position. The patient was in good condition, and had no tenderness over the hypogastrium. Operation under thymol spray. Incision from a hand's breadth above the umbilicus. The unopened uterus was pulled forward through the wound, and two strong wire ligatures passed round the supra-vaginal portion. These could not be ligatured at first on account of the head bulging into the cervix. The uterus was opened, and the child with some difficulty removed. It was asphyxiated, but was soon brought round. The ligatures were, immediately on the birth of the child, drawn tight by means of a Cintrab's apparatus, and the uterus, with the placenta *in situ*, and ovaries cut off. No sponging of the peritoneum was necessary, as nothing had escaped into it. The stump was fixed by a long needle to the lower angle of the wound. The wound was closed with deep silver and superficial silk sutures. No drainage-tube was used. On the thirteenth day the needle was removed, on the fifteenth and sixteenth the ligatures, and on the twentieth the sloughing portion of the stump separated. The stump wound healed without leaving a fistula by the sixth week. The author states that the procedure he followed—Müller's modification of Porro's operation—is easily carried out, and is safer than any of the other methods, and that the intra-peritoneal method, by whichever way the stump is treated, is so unsafe as to be inadmissible.—*Edin. Med. Journal*, July, 1881.

—

Enucleation of Subperitoneal Fibromata through the Vagina.

Czerny relates (*Wiener Med. Woch.*, April 30, 1881) two cases: the first done by Sutton, in which the vaginal roof was incised, and the tumour drawn out of the peritoneum through the vaginal incision. The tumour was attached by a broad pedicle to the posterior wall of the uterus. The pedicle was cut through, and the tumour delivered by an ordinary midwifery forceps. Some small intestine protruded, which was replaced with great difficulty. Death occurred after four

days. Necropsy revealed perforation of the small intestine by the manipulations employed during the operation. The second case, by Derweer, was one of large retro-uterine fibroma, pressing on the ureters, and causing retention of urine. After incision of the posterior vaginal wall, the tumour was drawn outside the vulva by a small forceps, together with the uterus, and the left ligament and ovary. The capsule of the tumour was opened, and the tumour enucleated, without cutting into the peritoneum. Silk sutures were inserted into the wound. Recovery took place at the end of six weeks. The tumour weighed 324 grammes. The author thinks the operation was unsuitable in the first case, but indicated in the second.—*London Med. Record*, June 15, 1881.

Medical Jurisprudence and Toxicology.

A Case of Belladonna-poisoning treated with Pilocarpin.

A correspondent to the *Brit. Med. Journ.*, for April 16, 1881, Mr. NICHOLAS GRATTAN, reports the following case:—

Mrs. M., aged 42, drank by mistake a wineglassful of a liniment at 9 P. M., December 23d, 1880. Fortunately for her, she had had a hearty dinner about four hours before. She discovered her mistake, and took two teaspoonsful of mustard in water, with no effect; walked a short distance into town, purchased an emetic, which she drank, returned home, and felt dizzy, her sight going, and shadows before her eyes. She lost the power of speech, became greatly excited, had convulsions, and vomited slightly, and then lapsed into profound stupor. At 10.45 P M. I saw her for the first time. Her pupils were widely dilated, not acted on by light; her face was swollen, and of a bluish colour, more especially her lower lip, the mucous membrane of which appeared as if it had been blistered; the pulse was imperceptible in one wrist, almost so in the other; respirations 25. I introduced a stomach-tube, pumped in a mustard emetic, and washed out the stomach thoroughly. In half an hour she had vomited freely, and sensibility was slightly returning, but she soon lapsed again into complete stupor. From this time until 2 A. M. she was treated with cold affusion to the head, and flagellation with a wet towel over her heart. At 2 A. M. I heard from my friend Dr. Harvey (who had ordered the liniment for her) that she had taken two ounces and two drachms of belladonna liniment (*P. B.*). There being no marked improvement in her condition I determined to try pilocarpin. This I procured at 3 A. M., and injected subcutaneously one-fifth of a grain every fifteen minutes. After the third dose, there was a decided improvement; consciousness was evidently returning, her countenance became more natural, her pulse could be distinctly felt, and she was able to raise her hands to her mouth and throat. At 3.45 A. M. I administered a fourth dose of one-fifth of a grain. This had an effect on both pupils, which began to contract under the influence of light. She was evidently fast recovering, had a drink of tea and milk, and was able to speak. At 4.30 A. M. she was so far recovered that I thought it safe to leave her, desiring her friends to send for me should she relapse into her former state. When I saw her again at 10 A. M., she had had a refreshing sleep, from which she awoke, saying that she did not remember anything that had occurred. She had had in all four-fifths of a grain of pilocarpin; it appears to act as a direct antidote to the belladonna; it did not cause the least perspiration. She continued to feel slight dizziness for two days, with dilated pupils; but was, in every other respect, quite well. I gave her half a drachm of tincture of opium each night. The third day she had perfectly recovered.

MEDICAL NEWS.

The New Registration Law of Pennsylvania.

An Act "to provide for the Registration of all Practitioners of Medicine and Surgery," after passing the legislature, was signed by Governor Hoyt, June 8, 1881, and is effective at once. The object aimed at by the bill is to secure an authoritative list of practising physicians in each county of the State, which list shall be accessible by the public. It is based upon the registration law of New York. To insure against misapprehension the law requires the deposit of a duly attested copy of each physician's diploma to be deposited at the time of registration, and filed for future reference.

The bill has been carefully prepared, emanating, as it does, from the Committee on Medical Legislation of the State Medical Society; and it is chiefly due to the exertions of Dr. R. L. Sibbett, of Carlisle, the chairman of this committee, that it was finally passed. Its main features are as follows:—

Section I. requires the prothonotary of each county to keep a special book for the registration of physicians, in which also the subsequent death or removal from the county of a physician shall be duly inscribed.

Section II. declares that "every person who shall practise medicine or surgery or any of the branches of medicine or surgery for gain, or shall receive or accept for his or her services as a practitioner of medicine or surgery, any fee or reward, directly or indirectly, shall be a graduate of a legally chartered medical college or university having authority to confer the degree of doctor of medicine (except as provided for in section 5 of this Act), and such person shall present to the prothonotary of the county in which he or she resides or sojourns his or her medical diploma as well as a true copy of the same including any endorsements thereon, and shall make affidavit before him that the diploma and endorsements are genuine; thereupon the prothonotary shall enter the following in the register, to wit: The name in full of the practitioner, his or her place of nativity, his or her place of residence, the name of the college or university that has conferred the degree of doctor of medicine, the year when such degree was conferred, and in like manner any other degree or degrees that the practitioner may desire to place on record, to all of which the practitioner shall likewise make affidavit before the prothonotary; and the prothonotary shall place the copy of such diploma, including the endorsements, on file in his office for inspection by the public."

Sections III. and IV. provide that in case of the loss of a diploma a

certified copy may be deposited, and in the case of a person commencing practice in this State after the passage of this act, who holds a foreign diploma, that the same shall be countersigned by the dean of one of the medical colleges of this Commonwealth, the faculty of said college, first "being satisfied as to the qualifications of the applicant and the genuineness of the diploma."

Section V. especially exempts those who have practised medicine without a diploma since 1871 from the penalties of the act, provided they make oath to this fact, and record it upon the register.

Section VI. establishes the registration fee at one dollar.

Registration in order to be efficient requires the active co-operation of physicians, and due provision should also be made for the publication in the daily papers once or twice a year, of an authoritative list of qualified practitioners with their place of graduation, if they have any, if not, let this fact likewise be stated.

It is to be regretted, that there was a misunderstanding among some of our principal physicians in regard to the bill for creating a State Board of Health, an important function of which would have consisted in carrying out the provisions of this law in regard to the practice of medicine. As the registration law is framed, it is left to some voluntary informer to prosecute non-registered physicians who are engaged in practice, as a reward he shall receive one half the fine ($100), and in the discretion of the court also half of the penalty (a year in prison), at least, so the law reads, owing to faulty construction of Section VII.

As all properly qualified physicians are interested in the success of measures tending to protect the public from ignorance, incompetence, and imposture, it devolves upon them to aid in making the law effective, by having a committee appointed in each county medical society, which will have the duty, and the courage to perform it, of prosecuting violators of the law. In the absence of a properly constituted State Board of Health this responsibility obviously rests upon the county societies. Should this duty not be performed, it is feared that the law will be a dead-letter. Physicians having urged the passage of this act, the community looks to them to take measures for its enforcement.

—

Annual Meeting of the American Surgical Association.—The American Surgical Association will hold its first regular meeting at the Oriental Hotel, Coney Island, September 13, 14, and 15. Papers are promised by several gentlemen.

—

Health of New York.—The advent of the heated term, always so prejudicial to infantile life, has caused a notable increase in the city's mortality during the last month. While the advent of the low temperature, which prevailed during the first weeks of June, was manifest in a reduced death-rate, viz., 660 for the week ending June 4, and 633 for that ending June 11; the figures for the following weeks are as follows: June 19, 637; June 26, 699; July 3, 906; and July 10 it reached 1144.

The Board of Health has taken measures to avert this excessive great mortality from preventible disease, by appointing a corps of 50 tenement-house physicians, whose term of service will extend over five weeks. The corps, which commenced its duties on July 13, will visit every city tenement, at sufficiently frequent intervals, to examine into the health of the inmates and prescribe for the sick. The Board of Estimate and Apportionment has appropriated $30,000 for the salaries of special inspectors, physicians, and nurses, who will be appointed by the Board of Health to aid in combating contagious diseases.

It is noticed that typhus fever has perceptibly diminished during June. During the 12th week of the endemic (ending June 4) there were reported 32 new cases; in the 13th week, 37; in the 14th week, 16; and in the 15th week (ending June 25), 16. The total number of cases for May having been 125, and that for June 101, a reduction of 24 is seen to have taken place. Smallpox has, also, diminished. While 210 cases occurred in May, only 187 were reported in June. Of these 16 were discovered among newly-arrived English and Swedish emigrants. Several new cases developed in Brooklyn, and the disease also appeared in Newark, N. J.

Diphtheria is the only contagious disease which has not decreased during the last month. While there were 410 cases of this disease in May, 434 occurred in June. The number of scarlatina cases has fallen from 636, in May, to 435 in June; and rubeola from 587, in the former, to 430 in the latter month. German measles has diminished since the advent of the warmer weather. Eight cases of insolation were reported on June 29, 23 on July 7, 5 on July 8, and 6 on July 13.

—

The New York City Death-rate.—The reconstructed street-cleaning department is conducting its business with commendable thoroughness and dispatch, but the nuisances at Hunter's Point are still unabated. At a meeting of the Medical Society of the County of New York, held June 27, the chairman of the Committee on Hygiene stated that the death-rate of this city is the largest in the world, even exceeding that of London.

—

Honours to Professor Flint.—The degree of LL.D. was conferred upon Dr. Austin Flint, Sr., by Yale College, at its recent commencement. Dr. Flint is in Europe, whence he will return on September 1.

—

Chair of Gynæcology at the College of Physicians and Surgeons, N. Y.—Dr. T. G. Thomas has resigned the chair of Gynæcology at the College of Physicians and Surgeons, N. Y. City, and Dr. Paul F. Mundé has been appointed Clinical Lecturer on Gynæcology, for one year, at that institution.

—

Presentation to Dr. Shrady.—At a meeting of the New York Pathological Society, held on June 22, 1881, the members of the Society presented Dr. Geo. F. Shrady a massive silver pitcher and salver in token of their appreciation of his services as secretary. The presentation speech was made by Dr. A. Jacobi.

—

The New York Medical Mission.—The New York Medical Mission is the title of a religious and medical charity recently established in New York City. Its rooms at No. 5 East Broadway were formally opened on June 27. The opening exercises, which were conducted by Dr. C. A. Agnew, were largely attended by the poor people of the vicinity. A free dispensary, for the sick poor, will be attached to the institution, and a Gospel service will be held daily. The circulars of the mission state that "no recommendation will be required from patients other than that

they are sick and poor." The circular also states that no fees will be exacted for medical treatment, although remuneration will be expected from such patients as are able to pay.

Patients whose complaints are so serious as to prevent them from attending the dispensary will be treated at their homes. The Board of Managers includes Mr. C. Vanderbilt, Dr. F. H. Markoe, and Dr. S. B. Bangs.

—

Practical Philanthropy.—A summer resort for young workingwomen has been recently opened at Atlanticville, near Long Branch, N. J. The establishment accommodates fifty guests at a time, is situated on the seashore, and has a private beach for surf-bathing. The terms are five dollars for one week, or ten dollars for two weeks, and the sojourn of each guest will be limited to the latter period, in order that the advantages of the institution may be extended to the largest possible number. Mrs. Fletcher Harper, Jr., is one of the leading managers.

—

Institution for the Care of Infants and Young Children in New York.—The New York Society for the Care of Infants and Young Children has established its temporary asylum at the corner of University Place and Ninth Street. The asylum has accommodations for one hundred and fifty children. The circular of the institution states that the plan of the society also embraces the establishment, at as early a period as practicable, of day nurseries in the most populous parts of the city, capable of receiving hundreds of poor children whose mothers are obliged to leave them, during the day, to gain a livelihood at a distance from their homes. The children admitted to the asylum are required to be under the age of three years, and of legitimate birth. A medical attendant resides at the institution, and daily visits are made by the members of the attending medical board.

—

Sanitarium for Children at Mott Haven, N. Y.—A free sanitarium for poor children has been opened in connection with the Old Men's Unsectarian Home at Mott Haven, N. Y.

—

The Working of the Registration Law in New York.—On July 2d two medical practitioners were charged, at the Jefferson Market Police Court, by Dr. A. E. M. Purdy, President of the New York County Medical Society, with practising without a license. In default of bail, these unqualified practitioners were held for trial.

—

Summer Home for Children at Bath, L. I.—The "Summer Home" of the Children's Aid Society, at Bath, L. I., was formally opened on July 8, 1881. The home has, however, been occupied since June 18. It was purchased, together with several smaller buildings, and presented to the Children's Aid Society by Mr. A. B. Stone. The institution will accommodate about two hundred inmates. The children, who come from various tenement districts, are taken to the home in companies of two hundred, and return to the city at the end of a week to make room for the same number of new-comers. Nearly one thousand children have already visited the home this season.

—

Commencement Long Island College Hospital.—The twenty-second commencement of the Long Island College Hospital was held in the Brooklyn Academy of Music on June 14 The graduating class contained fifty-one members. The alumni of the college held their first annual dinner at Coney Island on the preceding evening.

River and Seaside Trips for Poor Children.—The floating hospital of St. John's Guild, of New York, has been thoroughly repaired, and will make three regular weekly trips during the heated season. Tickets can be obtained for the sick children of the poor and their attendants at all the city dispensaries and of physicians. The most usual excursion routes of the floating hospital are up the Hudson, into Long Island Sound, or through the lower bay. Those children in need of treatment at a regular hospital will be transferred to the seaside nursery at Cedar Grove, Staten Island, which is under the direction of the St. John's Guild.

—

Adulteration of Food and Drugs.—At a special meeting of the New York State Board of Health held on June 23d, the duties imposed upon the board by recent legislation were considered. The act to prevent the adulteration of drugs and food was discussed, and it was decided to engage competent chemists to analyze suspicious samples.

—

The thirty-second annual session of the Medical Association of Georgia was held in Thomasville on April 20th and 21st, 1881. The following are the officers for the ensuing year; President, William F. Holt, Macon; First Vice-President, Eugene Foster, Augusta; Second Vice-President, T. M. McIntosh, Thomasville; Secretary, A. Sibley Campbell, Augusta; Treasurer, K. P. Moore, Forsyth. The next session will be held in Atlanta, on the third Wednesday in April (19th), 1882.

—

The New Hampshire Medical Society held its ninety-first annual meeting in Concord, on Tuesday and Wednesday, June 21 and 22. A large and enthusiastic meeting assembled, and the following officers were elected for the ensuing year: President, Dr. H. B. Fowler, Bristol; Vice-President, Dr. A. H. Crosby, Concord; Treasurer, Dr. D. S. Adams, Manchester; Secretary, Dr. G. P. Conn, Concord. Executive Committee, Drs. J. W. Parsons, Portsmouth; P. A. Stackpole, Dover; and M. W. Russell, Concord. Anniversary Chairman, C. A. Tufts, M.D., Dover; and a Council of twenty members. The next semi-annual meeting will occur in September, at the "Wentworth," a famous watering-place near Portsmouth; and the next annual meeting will be in Concord, on the third Tuesday in June, 1882.

—

Injection Brou.—The following is believed to be the formula of the much-vaunted gonorrhœal injection of this name, taken from the register in the French public office: ℞. Zinc. sulph. gr. viij; plumbi acet. gr. xv; tinct. catechu, ℥j; tinct. opii, aqua, ää ℥iij.

—

Change in the Manner of Publication of the Transactions of the Ohio State Medical Society.—By a resolution of the Ohio State Medical Society, its proceedings now appear in the new *Ohio Medical Journal*, of which Vol. I., No. 1, has just appeared. As the journal of the Ohio State Medical Society, it takes the place of the usual volume of *Transactions*, and will be issued monthly, being in reality the successor of the *Ohio Medical Recorder*, which no longer exists. The Editor-in-chief is the Secretary of the Society, Dr. J. F. Baldwin, of Columbus, who is assisted by four Associate Editors: Dr. J. H. Lowman, of Cleveland; Dr. T. C. Minor, of Cincinnati; Dr. Geo. A. Collamore, of Toledo; and Dr. W. J. Conklin, of Dayton. Ohio thus becomes the first State to take the new departure in issuing its proceedings, and, as one result, the papers pre-

sented get a circulation of three thousand copies, instead of less than five hundred, as under the old method.

—

The Kansas State Medical Society held its fifteenth annual session at Topeka, May 10, Dr. B. E. Fryer, of Ft. Leavenworth, President, in the chair. The following officers were elected for the ensuing year: President, Dr. J. H. Stuart of Lawrence; Vice-Presidents, Drs. G. W. Haldeman of Paoli, and F. M. Guibor of Beloit; Secretary, Dr. F. D. Morse of Lawrence. The next meeting will be held at Emporia, on the second Tuesday in May, 1882.

—

Ergot in the Treatment of Sea-sickness.—Dr. T. S. Hopkins of Thomasville, Ga., writes very enthusiastically in regard to the value of ergot for the relief of sea-sickness, from personal experience, in a passage from Savannah to Philadelphia. He considers the following formula as preventive as well as curative. ℞. Ext. ergot fld. (Squibb's) f℥ss; potass. bromid. ℥ss; aquam ad ℥vj.—M. Dose, a tablespoonful two or three times a day.

—

Death from Chloroform(?)—Dr. O. B. Mayer, Jr., of Newbury, S. C., reports the following case of death during the administration of chloroform.

The chloroform was administered for the purpose of extracting a bullet from the hand, on June 13, 1881.

The patient, coloured, age 45 years, was an habitual drunkard, though rarely, if ever, sick, and appeared to be in good health. He had abstained from food and drink for twelve hours. When the chloroform was administered, the patient who had just arrived at the stage of excitement, was seized with an epileptiform convulsion, with marked opisthotonos. He was immediately turned on his side and artificial respiration commenced; stimulants were hypodermically administered, and the patient's head kept lowered. At no time was any evidence of returning life seen. The man died during the fit. He was not subject to epilepsy. A few weeks previously chloroform had been administered to a lady from the same phial successfully, though under its effects for thirty minutes. No autopsy was made.

—

Seaweed as a Substitute for Jam.—Among the few serious political papers published in Paris, we note that the *Temps* occasionally renders good service by describing, in popular language, frauds that gravely compromise public health. Thus on the subject of jellies we have some startling disclosures. We should remark that in France fruit preserves are generally sold as jellies, and not as jam, in which the seed, stones, and sometimes the outline or skin of the fruit itself can be discerned. Falsification is, therefore, more easy. For this purpose gelatine made from fish naturally suggested itself, but was found too expensive. Of late years, however, since the importation on such a large scale of Chinese and Japanese porcelain, etc., a new solution has been found to the problem. The objects imported are generally packed with a common maritime plant that is used instead of straw. This seaweed possesses, however, peculiar properties. When placed in a tumbler of water, it absorbs the water in a few minutes; then a number of shoots grow, and constitute a jelly nearly as transparent as the water from which it is made. This plant, the Arachnoïdiscus japonicus, only costs the trouble of bringing it over. The jelly it yields is easily sweetened with glucose, and cochineal or other colouring matter is added with equal facility to imitate the colour of the fruit. The perfume and the taste were the only real difficulties that remained to be overcome. After considerable study it was discovered that by mixing

four parts of acetic ether and tartaric acid with four parts of glycerine and one part of aldehyde, formic ether, benzoic, butyric, butyric amyl, acetic, œnanthylic, methyl-salicylic, nitrous, reberythric, and succinic, a perfect imitation of the odour of raspberries was produced. By putting a little of this essence to the seaweed which has been allowed to develop itself in water, a substance is obtained which has the consistence of fruit jelly, though no fruit has been used, which is sweet, though no sugar has been employed, and which has the colour and fragrance of raspberries, though altogether destitute of that fruit. When this ceases to please, another very good fruit flavor is produced by treating castor oil with nitric acid! Fortunately, though wonders are wrought with the Arachnoïdiscus japonicus, the result is not absolutely perfect. The jelly still retains a little of the fibrous nature of the plant, and has a tendency to split and fall to pieces, instead of forming adhesive lumps. Examined with the microscope, it has no resemblance to the jelly made from fruit. Then, as the jelly must be coloured, it is easy enough to discover the presence of an artificial dye. Without resorting to the laboratory, it suffices to dissolve a little of the suspected jelly in some tepid water, and dip a white silk ribbon in the solution. If it is a natural jelly, the ribbon will simply be a little soiled; but if the jelly has been artificially coloured, the ribbon will also be coloured. By giving publicity to all these details, the frauds practised will be constantly discovered, and the perpetrators brought to justice. We fear also that the falsifications the French have contrived, the English will not be slow to imitate, unless it is generally known that the public are on the *qui vive*.—*Lancet*, Dec. 11, 1880.

—

The Rest.—A charitable institution, known as the "Rest," was founded, in January, 1881, at No. 4 Winthrop Place. Its object is the care of convalescent men who have been recently discharged from the city hospitals, but who are not sufficiently strong to undertake their usual occupations. The institution is under the management of the Sisters of the Stranger.

—

Removal of a Hypertrophied Spleen.—In even these days of "heroic" operations, it is very questionable whether the following operation reported in the *Gaz. Med. Lombardia* of April 9 can be justified: "Dr. Chiarleoni performed at the Casa di Salute, Milan, on March 26, splenectomy on a female patient suffering from paludal cachexia, in the presence of a large number of distinguished colleagues. The operation, executed with great method and freedom, was very laborious, owing to the extensive and strong adhesions of the spleen to the left edge of the liver and the diaphragm. It was impossible to tie all these adhesions before removing them, and a very considerable hemorrhage from the surface (*a nappo*) ensued, and this, conjoined with a certain amount of nervous exhaustion, caused the woman's death a few hours after the termination of the operation. As far as we are aware, so bold an operation has not been executed in Italy, except on one occasion by Drs. Zaccharelli and Fioravanti, at Naples, in 1549.—*Med Times and Gazette*, April 23, 1881.

—

Ultimate Effects of Tracheotomy.—In a note read at the Academy of Medicine (*Bulletin*, April 5), Dr. MONGEOT drew attention to the ultimately fatal results of tracheotomy. He had for a long time investigated the subject, and had come to the conclusion that children who had successfully undergone tracheotomy, and had worn a canula for a more or less prolonged period, did not live to attain their majority. He had long made inquiries among a great number of

practitioners, and had only succeeded in discovering five or six adults who had undergone this operation in their infancy; while military surgeons, interrogated for more than twenty years past, all avowed that in examining conscripts they had never met with the scar characteristic of tracheotomy. He suggests further investigations on the subject by the military boards of Paris, seeing that the operation is performed about thirty-five times annually on hospital children. He also refers to Dr. Martin's proposal to cease the employment of metallic canulæ. —*Med. Times and Gazette*, April 23, 1881.

—

Statistics of Colour-Blindness.—The report of a Committee appointed by the Ophthalmological Society of the United Kingdom (*Lancet*, April 23, 1881) to collect statistics of cases of colour-blindness presents many features of special interest. The secretary of the Committee, Dr. Brailey, with the assistance of sixteen colleagues, has examined 18,088 persons of all classes, of whom 1657 were females. It is at once curious and suggestive to find that while the average percentage of colour defects among men is 4.76 and 3.5 for very pronounced defects, it falls in women to the low figure of 0.4. This, if true, would seem to suggest a new sphere of labor for women. If women are comparatively free from colour-blindness, they are so far specially indicated for many of the less laborious occupations in which good colour-perception is desirable or absolutely indispensable.

—

Recent Health Legislation.—The New York Senate has passed a bill conferring upon the city health board the power of quarantining any building in New York City, which is used as a dwelling, when such a course seems necessary to prevent the dissemination of any contagious disease.

The New York Legislature has passed a bill for the prevention of the adulteration of food and drugs, which makes it a misdemeanor liable to punishment with a fine of $50, for the first and of $100 for the second offence, to sell any food or drugs adulterated within the meaning of the bill. The adulterations included within the meaning of the act are carefully classified, and the terms "drug" and "food" are stated to comprise every article used by man as food or drink as well as all medicines, whether for external or internal use.

—

Training-school for Nurses.—A new training-school for nurses in connection with Mount Sinai Hospital, has recently been opened at 852 Lexington Avenue, in convenient proximity to the hospital. One of the graduates of the Bellevue Hospital Training-school is the superintendent of the new school which numbers four trained head nurses and eight assistant nurses. The course of training covers two years' time.

—

Manufacture of Quinia.—A patent for the manufacture of quinia from coal tar has been applied for by a prominent drug house.

—

An Action for Malpraxis in Belgium.—The *Presse Médicale Belge* (April 24) refers to an action brought by the children of a person who had died after the injection of five milligrammes of morphia for the relief of severe pain. The experts called proved that the accusation (brought, it is said, at the instigation of a rival practitioner) was wholly groundless, the individual having in reality died from the natural results of organic disease. The tribunal not only acquitted the accused, but adjudged the persons who brought the accusation to pay 1000 fr.

damages to him. If this latter action were followed up in other countries these unfounded accusations would soon diminish.—*Med. Times and Gazette*, May 7, 1881.

—

Professor Billroth's Fourth Case of Resection of the Stomach.—We learn from the *Wiener Medizinische Wochenschrift*, No. 22, that Prof. BILLROTH'S patient, on whom he performed excision of the pylorus for cancer on January 29, has just died in Vienna. The case, surgically speaking, has become historical, for the operation was quite a new departure, and one which, but a short time ago, would have been considered impracticable. The case is rendered more interesting by the fact that an autopsy was obtained, and that thus the condition of parts post mortem has been accurately studied. Dr. Zemann—in the absence of Heschl, the Director of the Pathological Institute, whose death from the effects of a post-mortem wound has since occurred—conducted the examination. He found that death had resulted from metastatic deposits of cancer throughout the entire peritoneum, the duodenum and jejunum being likewise coated with a similar deposit, so that it was impossible to separate them one from another. As regards the stomach, it is stated that it retains its natural form, and that no one unacquainted with the operation to which it had been subjected would have observed anything remarkable about it, or guessed that fourteen centimetres had been removed from it." The duodenum had been attached to its lesser curvature, so that a little pouching was observable along the greater curvature. The woman had not suffered from any digestive troubles, but had taken and retained her food very well. At the point of junction there was no stenosis, the thumb being easily passed through the orifice. The union was perfect in all respects, so that hardly any scar could be perceived along the line of the suture.—*Med. Times and Gazette*, June 4, 1881.

—

Death of Professor Skoda.—The cable announces the death of Dr. JOSEF SKODA, the distinguished Vienna professor, on June 13, 1881. He was born at Pilsen, Bohemia, December 10, 1805, graduated at the Vienna medical schools in 1831, distinguished himself in Bohemia during the cholera epidemic of 1832–33, became in the latter year second physician to the general hospital at Vienna, and became successively physician for the division of lung diseases (1840), chief physician of the hospital (1841), professor of clinical medicine (1846), and a member of the Vienna Academy of Sciences in 1848. Professor Skoda was one of the first to popularize the use of the stethoscope of Laennec, was a great authority on pathological anatomy and on the new methods of auscultation and percussion. His chief work was a "Treatise on Auscultation and Percussion" (1839, sixth edition, 1864).

—

Letter from Prof. Chaillé.

New Orleans, La., July 5th, 1881.

MR. EDITOR.

Dear Sir: Your Journals for July contain two statements in reference to my duties as the representative in New Orleans of the National Board of Health, which deserve correction.

I. The MEDICAL NEWS p. 442, states that "The Louisiana State Board of Health, at its meeting of May 19th, adopted the report of Dr. Formento, which was based upon these instructions [National Board of Health] to Dr. Chaillé, and which renders them *nugatory in almost every particular*, so far as the co-operation of the Board is concerned." A more careful reading of the instruc-

tions on the one hand, and of the report on the other will show that, practically and in all essential particulars, the former were not rendered nugatory in any particular, *except in the single one* referring to the Ship Island Quarantine. A copy is inclosed of my reply to the report on this subject.[1]

II. The *American Journal of the Medical Sciences*, p. 240, referring to the unfortunate disagreement last year, respecting the diagnosis of certain alleged cases of yellow fever, states that "This unfortunate dispute has already been referred to in our columns, and we would therefore simply remark here, that the obvious lesson from its occurrence is in the future to secure so prompt and thorough an investigation, by representatives of all parties interested, of any 'suspicious cases,' that either there shall be no doubt as to their nature, or *the party in error shall be conclusively condemned by the whole country on the evidence of subsequent events.*" If the last clause, italicized, means anything, it must signify that in the writer's opinion, cases of veritable yellow fever must be followed by other cases of the same disease; for, no other subsequent event, except the presence or absence of subsequent cases could have any bearing on the issue. It is surprising to me, that any writer in a journal of such authority as the *American Journal of the Medical Sciences* should display so little knowledge of the history of sporadic cases of yellow fever in all of its noted habitats. In this city as elsewhere, one case alone, or several widely separated cases of *undoubted* yellow fever have repeatedly occurred, without being followed by any "subsequent events" whatever. Therefore, "the conclusive condemnation by the whole country" of a diagnosis of yellow fever, because followed by no subsequent events, would be an outrage upon medical and upon sanitary science. It is painful that your journal should be the instrument of teaching "the whole country" any such false and mischievous lesson, and it is hoped that you will have this error corrected.

Yours very truly, STANFORD E. CHAILLÉ, M.D.

[We gladly publish Dr. Chaillé's communication in deference to his wishes and to prevent any possible misunderstanding by others. It must be evident, however, to any one who has read the latter statement referred to, that it does not have the application that our correspondent has drawn from it, certainly no one would be so rash as to condemn the whole country on the negative evidence quoted in illustration; but where suspicious cases *are* followed by cases of veritable yellow fever the responsibility rests upon the physicians in charge of the early cases of not having made a correct diagnosis or of concealing it. In doubtful cases it is incumbent upon those in charge to take all the means required of securing full investigation and consultation in order that their true character may be brought out, and if the cases by some called "rice-fever," and others "bilious malarial" fever are found to be yellow fever, the proper authorities may then be promptly notified as in other epidemic diseases. If the sentence referred to by Dr. Chaillé means anything at all, it means this, in our opinion.

ED. MED. NEWS AND ABSTRACT.]

To Readers and Correspondents.—The Editor will be happy to receive early intelligence of local events of general medical interest, or which it is desirable to bring to the notice of the profession. Local papers containing reports or news items should be marked.

---

[1] Pamphlet inclosed entitled "Eadsport, Ship Island Quarantine and the National Board of Health." Reprint from the *New Orleans Democrat*, June 9, 1881. This is an open letter to the Louisiana State Board of Health, by Dr. S. E. Chaillé, in which he ably defends the legality, expediency, and efficiency of the Ship Island Quarantine. —ED. MED. NEWS AND ABSTRACT.

CONTENTS OF NUMBER 465.

SEPTEMBER, 1881.

CLINICS.

CLINICAL LECTURES.

PAGE

Clinical Lecture on Catalepsy; Trichinosis; and the Treatment of Pneumonia by Bloodletting, Cold Sponging, and the Wet Sheet. Delivered at Bellevue Hospital, New York. By AUSTIN FLINT, M.D., Physician to the Hospital 515

Case of Trephining for Anomalous Convulsive Attacks, Supervening several Months after Injury to the Head. A Clinical Lecture. By J. W. HULKE, F.R.C.S., F.R.S., Surgeon to, and Lecturer on Surgery at, the Middlesex Hospital 522

HOSPITAL NOTES.

Bellevue Hospital, New York. (Service of Dr. Austin Flint, Sr.):—Transient Mellituria. Cardiac Disease 527

MONTHLY ABSTRACT.

ANATOMY AND PHYSIOLOGY.

PAGE

Microscopic Structure of the Cortex Cerebri. By Professor Betz . 529

Anatomical Structure of the Mammary Gland. By Prof. Kölliker . 531

MATERIA MEDICA AND THERAPEUTICS.

Waldivin. By M. Tanret . . 532

Xanthoxylum Naranjillo as a substitute for Jaborandi. By D. Parodi 533

Oxidized Oil of Turpentine as a New Antiseptic. By Mr. C. T. Kingzett 533

Naphtha Oil in Affections of the Skin. By Prof. Kaposi . . 533

Pepsine a Solvent in Albuminous Obstruction of the Bladder. By Dr. Hollmann 534

MEDICINE.

Changes in the Salivary Glands in Lyssa. By Dr. A. Elsenberg . 534

Turpentine in Diphtheria. By Dr. Bosse 535

Diphtheria in Russia. By Berg . 535

Vidal's Lotion for Diphtheria . 536

Neuralgic Character of Certain Forms of Angina, and their Treatment by Sulphate of Quinine. By Dr. R. Saint-Philippe . . . 536

Doliarin as a Remedy for Ankylostomum Dubini. By Dr. Rozzolo . 536

Varix of the Œsophagus. By C. J. Eberth 537

Typhoid Fever with Low Temperature. By Frantzel . . . 537

Desquamation and Infection following Scarlatina. By Mr. W. K. Rix 537

Theory of Mitral Insufficiency . 537

The Treatment of Phthisis by Residence at High Altitudes. By Dr. C. Theodore Williams . . . 538

Pneumothorax and Empyema. By H. Senator 540

Stertorous Breathing in Apoplexy. By Dr. Robert Bowles . . 540

Pathological Changes in the Retina associated with Progressive Pernicious Anæmia. By Uhthoff . 541

Cerebral Amblyopia and Hemiopia. By Dr. Ferrier 541

PAGE

Treatment of Epilepsy. By Dr. Laskiewicz 541
Compression of Carotid in Trigeminal Neuralgia. By Dr. Seifert . 542
Remarks on a Case of Catalepsy with Speech-reflexes. By Schiller . 542
Formation of Trichinæ Cysts. By M. Chatin 542
The Need of Revaccination. By Dr. Renner 543
Ainhum. By Dr. Francis Guyot . 543
Antiseptic Inhalations in Pulmonary Affections 544

SURGERY.

Removal of the Entire Tongue through the Mouth by Scissors. By Dr. Walter Whitehead . . 544
Suprapubic Lithotomy. By Dr. Carl Langenbuch 545
Treatment of Blood-Cysts of the Thyroid Gland by Electrolysis. By M. Berger 546
Symptomatology of Mediastinal Tumours. By A. Schreiber . . 547
Causes of Death from Burns. By Lesser 548
Rupture of the Bladder. By Dr. Asmuth 549
Cancer of the Breast and Meninges. By Dr. Otto Lund . . . 549
Of Syphilis Fungus. By Dr. Bermann 550
Case of Hepatotomy for Hydatids. By Mr. Lawson Tait . . . 550
Treatment of Intra-Thoracic Suppurating Hydatid. By Dr. S. D. Bird 551
Early Resection in Tuberculous Disease of the Joint. By Dr. König 553
Ozæna from Retained Secretion. By Dr. Kendal Franks . . . 554
Blindness after Glaucoma. By Kubli 557
Operation for Trichiasis. By Fæsche 558

MIDWIFERY AND GYNÆCOLOGY.

The Broad Ligament and Pelvic Cellulitis. By MM. A. Guérin and Lebec 558
Obstetrical Auscultation. By Prof. Depaul 560
Pilocarpin in the Treatment of Puerperal Convulsions. By Dr. A. Hamilton 561

MEDICAL JURISPRUDENCE AND TOXICOLOGY.

Cadaveric Alkaloids . . . 562
The Influence of Ammonia in Chloroform-Poisoning. By Dr. Sidney Ringer 563
Poisoning by Potassium Bichromate. By Dr. Wm. A. M'Lachlan . . 563

MEDICAL NEWS.

The International Medical Congress 565
The Sanitary Condition of Summer Resorts 566
International Medical Congress, London, Aug. 2–9, 1881 (Special Correspondence of the Medical News and Abstract) . . . 569
Scarlatina in Charleston, S. C. . 573
Health of New York 574
Appointment at the New York University 575
New York Physicians at the International Medical Congress . . 575
Regulation that does not Regulate . 575
Meeting of American Ophthalmological Society 575
Organization of the Barren County Medical Society, Kentucky . . 575
Meeting of the American Otological Society 575
Ice for the Sick Poor in New York . 575
New Summer Cottage Charity . 575
Seaside Sanitaria 576
Working of the Sick Children's Mission, New York 576
Country Week for Sick Children . 576
To Readers and Correspondents . 576